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Sustainability Reporting and the developing role of the ESG/Sustainability Controller

**A qualitative study among Swedish medium
and large sized companies**

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Abstract

Sustainability is a universal topic that has gained in significance during the last decade due to the increased risks for society as well as the environment itself. Therefore, a lot more attention is given to how companies disclose upon their impact on environment, society and governance. This paper aims to pick up on criticism to sustainability reporting regarding the variety of different frameworks surrounding this topic and investigate upon how companies use them to create their reports and if, in their opinion, unification can be reached in the nearby future. The second objective of this thesis is to explore upon and collect knowledge regarding the developing role of the new profession of the ESG/Sustainability controller.

To reach the research objectives and collect sufficient data, semi-structured, qualitative interviews have been conducted with six companies and their respective sustainability reporting responsible. Previous research points out that the ‘arena’ of sustainability reporting frameworks has become too dense. This has led to companies firstly struggling to navigate through the enormous amount of regulations and guidelines, secondly adversely affected the implementation of harmonization within sustainability reporting and thirdly using their reports as marketing tools. These theoretical findings have been mostly supported by the results of this thesis. Almost all of the interviewed companies have adopted a common index, called GRI, that builds their sustainability disclosure base. However, the findings of this thesis point out that their efforts, to go beyond this reporting guideline, can be connected to motives that are either of external, operational, transparency or recruitment nature. Even though companies would wish for a common, unified reporting framework, such as the upcoming inclusion of CSRD in the future, and see potential advantages, there are some specific, current challenges that have to be overcome first regarding sustainability reporting. Nevertheless, from the data analyzed it is evident that companies are looking forward to this new, mandatory reporting regulation and prepare themselves adequately and intensively. The results of the qualitative study regarding the development of the new controller profession further suggests that the ESG/Sustainability controller has a broad post-graduate background, however, not only in business administration. One reason is that the tasks of this new profession vary by quite some margin from traditional controlling tasks and their responsibilities also go beyond merely preparing, analyzing financial reports and supporting management, but are dedicated to the sustainability reporting process and other sustainability projects.

Keywords: Sustainability, Sustainability Reporting, ESG Controller, GRI, CSRD, Sustainability Reporting Motivation

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1 Introduction

1.1 Subject choice

We, the authors of this thesis, are both students at Umeå university with the main focus on either Finance or Accounting within business administration. In various discussions on finding a suitable thesis issue, we came across topics intertwined with our personal experiences, but most importantly our previous courses. We ended up at the topic of sustainable reporting due to both of our professional experiences within the controlling department as well as the theoretical input from topics of previous lectures at Umeå university, such as ESG, sustainable regulations and circular economy. Furthermore, within our individual job search, we found that there are little jobs offered as a 'sustainable' controller and the requirements and tasks varied quite drastically. Therefore, we are choosing to shine a light on these specific research areas.

1.2 Problem background

Climate change is one of the key words of the twenty-first century (Urry, 2015, p. 45). The term entails that the planet's climate is changing mainly due to the 'greenhouse effect', which is a natural phenomenon created by Earth to prevent some of the solar heat from being reflected back into space and to enable liquid water and habitable temperatures on the planet. However, since the beginning of the industrial revolution and the use of fossil fuelled engines, mankind has been inevitably intertwined with this planetary process, impacted and shaped it from then on out (Rosen, 2021).

Even though in the past many scientists believed that changes in the Earth's climate were part of a natural process and humans could not possibly change its course, latest findings have proven this assumption to be wrong (Urry, 2015, pp. 45-46). One of the main reasons for this is an ongoing, worrying process that endangers various species on the planet, including mankind itself, named global warming. The term 'global warming' indicates that the average surface temperatures on planet Earth are getting warmer. Evidence provided by Lindsey & Dahlman (2023) shows that the rate by which the planet's temperature has been rising, has increased from 1981 onwards from 0.08 to 0.18 degrees Celsius per decade. The main reason for this increase in global warming is the large amount of emissions of carbon dioxide that can be linked to industrial activities and mobility.

The consequences for the planet's ecosystem and humans are drastic. Global warming increases the chance of extreme weather events on the planet such as wildfires, storms, earthquakes, etc. This is one factor for an increased number of human mortalities, the destruction of ecologically valuable environment, such as trees, or endangering human living space through rising sea levels. Yet another consequence of climate change are damages to local water regulation systems or even the oceanic ecosystem. This already leads to changes within seasonal climates, the death of many oceanic species and the melting of arctic ice on the poles, which could set yet another greenhouse gas, called permafrost, free that is currently being held below surface by this ice. Furthermore, the changes of global oceanic water could worsen social problems on a global level even further, such as scarcity of fresh water and food sources (IPCC, 2022, p. 9).

According to a NRDC report the main factors influencing global warming in the United States are transportation, electricity, industry, commercial and residual as well as agricultural activities. The third most important part of man-made global climate change is through economically driven activities, affecting it by around 24%. Those activities can be named as the production of various elements that are necessary to build the infrastructure of human society. However, the production of those goods is the reason for causing nearly a quarter of the emissions of the United States through releasing greenhouse gases, using electricity or polluting air (Turrentine, 2022).

One of the measures to counter and significantly decrease the amount of emissions is through sustainability reporting, an attempt of regulation. According to Swedish legislation, a company in Sweden is only suggested to disclose an individual sustainability report if two of the following three points are true. Firstly, its average number of employees reaches 250 within the last two business years. Secondly, the company's assets amounted to more than 175 million SEK within the last two fiscal years. Lastly, within the last two years, the company reached over 350 million SEK in net sales. The aim of disclosing such an individual document is to increase focus on transparency on how the company affects the environment, society as well as governance. However, up until now, sustainability reporting guidelines propose rather a suggestion of what companies should disclose within their report, rather than giving strict rules that companies have to follow (Worldfavor, n.d.).

This rather voluntary legislation has been changed from the beginning of January 2023 onwards, as the EU has accepted the new legislation known as the Corporate Sustainability Reporting Directive (CSRD). This new law is targeted to introduce stricter rules when it comes to reporting information and financial disclosure of sustainable matters for SME and large companies. The main sustainability reporting sectors affected by the new legislative are of environmental, social and anti-crime interest for external stakeholders and investors and might affect up to 50 000 European companies (European Commission, 2023).

That a majority of the largest global corporate firms are already including sustainability within their reporting procedure shows a study conducted by KPMG (2022, p. 13), where by 2022, 96% of these companies have reported on sustainability topics. This is an enormous change, compared with the sustainability reporting rates of 35% in 1997.

Empirical evidence, according to a study conducted by Johari & Komathy (2019, pp. 41-42), shows that there is a significant impact of reporting sustainability matters to external stakeholders or investors on some specific firm performance KPIs. However, as Siew (2015, pp. 187-188) identifies several critiques regarding standards by the Global Reporting Initiative (GRI) that include a particular focus on the social, rather than the economic or environmental level. Furthermore, Siew suggests that companies' intentions to perform sustainability reporting are more to persuade external stakeholders, rather than being genuinely concerned about environmental or social matters. This furthermore reflects in a study performed by O'Neill et al. (2011) where companies' approaches to reporting on the Carbon Disclosure project (CDP) were compared. The results show that many factors regarding disclosure of carbon emissions are reported differently, such as the time frame, units or informational transparency.

The reason for this discrepancy could also be due to the use of different standards that are being put in place for sustainable reporting disclosures. Therefore, with rising popularity of the topic and increasing regulatory standards, it becomes more and more difficult for companies to find the right measures (Bosi et al., 2022, p. 2). The most important legislative standards for Environmental, Social and Governance (ESG) matters are provided by the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB) and the International Integrated Reporting Council (IIRC). The main differences are that the GRI provides a rather company-specific view primarily targeted to different stakeholders within the company environment. In contrast, the SASB and the IIRC provide sustainability information specifically for credit providers on a wider, industry level, without any input by the stakeholders. Although differing in most aspects, there are some similarities that can be found within the overall goals and intentions of the standards, such as the focus on company cooperation to increase sustainability reporting knowledge and to create shared networks of empirical practices (Van Hecke, 2021).

From an environmental perspective, the question must also be asked how effective sustainability reporting is on solving actual environmental problems. Pucker (2021) mentions that even though sustainability reporting as an increasingly growing topic, negative environmental issues, such as carbon emissions, are still increasing from year to year. For Pucker the reasons are that due to the lack of reporting standard unity, companies are able to use sustainability reporting as a kind of marketing tool for positive, external effects or to deliberately shift the focus away from negative environmental or social issues created by the company. This potential drawback by disclosing sustainability matters has also been mentioned by Siew (2015, p. 188).

Nevertheless, sustainability issues seem to receive more and more practical contribution towards integrating them into the managerial as well as corporate processes for making strategic decisions. Various accounting experts are yet unsure whether frameworks surrounding sustainability and management control systems (MCS) should be combined and summarized within the sustainability report. This is due to the already mentioned risks of 'greenwashing' rather than integrating sustainability measures throughout the company and its control processes. For a successful implementation of long-term sustainable strategies, it is necessary to intertwine sustainability with MCS processes. Therefore, the objective is to reach transparent, accountable and well-performing processes internally as well as externally. As a result, integrating sustainable systems within the company's internal processes as well as reporting systems is generally connected to a better overall financial performance (Rahi et al., 2022, p. 563).

The main issue for companies combining sustainability reporting with management control systems is to decide whether to integrate sustainability in an all-new system with separate tools or to implement sustainability as a part of already existing management control systems. One approach is to integrate broad sustainability reporting tools, such as the sustainability balanced scorecard (SBSC) as a first step to connect sustainability issues with financial and managerial processes. The main issue is to understand how sustainability and management processes can be connected in a useful way for the company's reporting system to profit (Beusch et al., 2022, p. 2).

According to a study by Walińska & Dobroszek (2021, pp. 7152-7153) financial controllers have been searched more widely among various job markets within the period of the covid-19 pandemic than functional controllers.

However, both are somewhat being tasked to ensure the integration of not only financial, but also non-financial, sustainable measures that are being reported on. However, to fully ensure that sustainability reporting issues are being understood and in a next step integrated with management control systems, the urge for a new type of job within the controlling department has arisen. This is the ESG controller, who, in theory, is mainly tasked with implementing sustainability measures that fit the company to line up external with internal expectations when it comes to sustainability reporting. Even though companies are beginning to search for ESG controllers, due to various legislative changes, the extent to what the actual sustainability, integration and controlling tasks look like are still vague (Bricker, 2022).

From the previously mentioned issues, we arrive at the following research questions:

1. How are companies conducting their sustainability reports and what is their opinion on a unified sustainability reporting framework?
2. What is the companies' opinion on the upcoming role of the ESG/Sustainability controller in terms of necessity, tasks, responsibilities and differences to traditional controller functions?

1.3 Purpose statement

As already mentioned, sustainability reporting is an essential topic that is currently gaining in popularity and necessity, both in a social as well as in a financial perspective. Companies are integrating the latest, mostly voluntary sustainability regulations within their sustainability report. However, critics have picked up on firstly the reasons for integrating a sustainability report as mostly using it for 'greenwashing' purposes and secondly the various frameworks and guidelines that surround the sustainability report. The new position of the ESG controller in that respect is responsible for sustainability regulations being held in place and its reporting. Moreover, many job descriptions are very vague about the actual extent of the ESG controller's overall tasks as well as his/her connection to other classical controller tasks. Therefore, the purpose of this study is firstly to find out how much companies are actually using sustainability reporting frameworks, if they combine different guidelines to prepare their sustainability report, what they think about a unified sustainability reporting guideline and how they prepare for and view the new CSRD legislation. The second objective of this thesis is to investigate whether companies are hiring dedicated 'ESG/Sustainability controllers' or if they split sustainability reporting tasks among already existing financial/functional controllers or other reporting functions. This should highlight and broaden the existing knowledge on this brand-new controlling profession that is starting to emerge.

2 Theoretical frameworks

2.1 Triple Bottom Line (TBL)

Historically, the triple bottom line (TBL) has its origins in the mid 90s, when John Elkington tried to find an alternate performance measuring path that goes beyond the usual key performance indicators (KPIs), such as revenue, profit, return on investments, etc. Therefore, the focus is not solely on financial reporting, but taking into account non-financial topics to measure the effects of a company and its performance. This non-financial layer generally considers reporting on a company's sustainable presence (Slaper & Hall, 2011, p. 4).

The trend to report on these factors spurs from a movement that began in the 70s, as human made issues regarding its environment were recognized as getting out of control. It was accepted that sustainability as the concept of optimising the usage of natural resources to improve everyday human and social life and achieving this by sparing and taking care of the environment affected (Correia, 2019, p. 30).

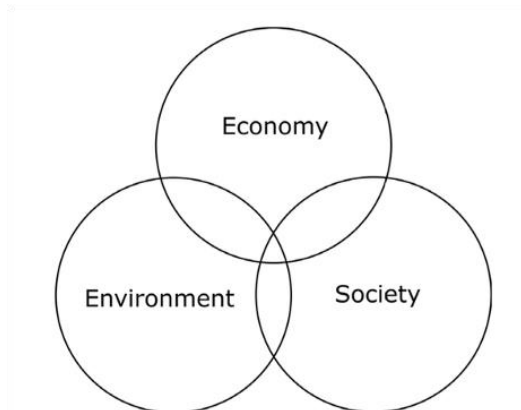


Figure 1: Venn diagram (Correia, 2019, p. 31)

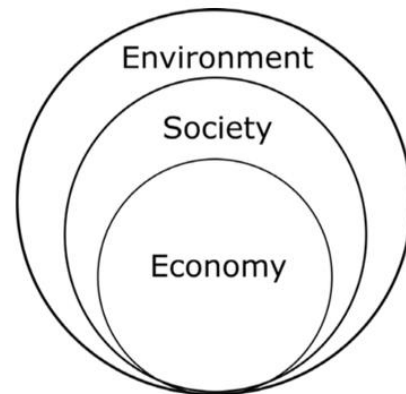


Figure 2: Russian doll model (Correia, 2019, p. 31)

Figure 1 describes the three main layers of the TBL as economy, environment and society that are entangled with each other and overlap and influence each other. This model is called the nested spheres model or Venn diagram and its greatest criticism spurs from the fact that there is no underlying hierarchy between those three topics. Whereas Figure 2 depicts an onion-like approach frequently called 'Russian doll' model, where the inner layer, economy, not only affects the outer layers and vice versa, but actually is a part of the outer layers of society and environment. Therefore, effects and relationships between the triple layers can be identified with much better precision and clarity. The first layer, economy or profit, represents the way companies measure their performance through financial reporting KPIs, such as profit, return on investment, stakeholder value, etc. This can be internally in terms of the companies' operations, but also externally to look at economic effects on society. Secondly, society encompasses the companies' influence on people's personal and mental well-being, including topics such as employee rights and regards, education, community issues as well as a fair pricing. One important topic that spurs from this layer is the trend of corporate social responsibility (CSR) work within companies to identify and achieve societal objectives. CSR should therefore be used by companies as a way to communicate company specific values, ethics and objectives with society.

The last layer, environment or planet, deals with the impacts of companies on nature and its resources. The main objective is to state where the company affects the planet and its resources the most, keep track of the developments and highlight improvements. The environment is believed to be the most important layer in this model due to the importance of resources for companies that are limited and therefore vital for the existence of them. Other factors that are rarely mentioned in this classic layout are ethical considerations, which deal with how humans interact with each other and which values they represent. Ethical behaviour should, according to the opinion of many scholars, be seen as a fourth layer within this model (Correia, 2019, pp. 30-32).

The major criticism to this relatively modern reporting model is that the logic of the term bottom line, which is often referred to as the last line in the income statement or the net profit or loss, itself is flawed. The main argument against TBL is that financial bottom lines and non-financial ones are neither compatible, nor comparable. Therefore, it is difficult if not even impossible to make use out of 'financial' data used for a social or environmental bottom line (Norman & MacDonald, 2003, pp. 6-7).

Another limitation to the TBL is that companies use it as a standard model and abuse its current popularity, when in reality they are simply reporting on financial topics and additionally add some vague promises about social and environmental topics, without properly identifying and objectifying them (Norman & MacDonald, 2003, p. 13). This hypothesis is being supported by Pava (2007, p. 109) as the author mentions that especially companies affecting the social and environmental layer in a significant and sometimes negative way, take too little responsibility and a weak stance within their reports. They do this by either shifting the blame and presenting themselves better than they are or by letting some other party take position for more precarious topics. This is being exemplified with the example of tobacco companies, that are willing to state the number of smokers as well as generic health suggestions from third parties. The companies' position, on topics such as health care or social risks, is never mentioned. Therefore, reporting on non-financial topics can be used by companies to draw attention away from topics regarding their own involvement in negative social and environmental developments and to highlight their commitment for other more beneficial topics for the company.

As already mentioned above, when calculating and measuring the triple bottom line layers it becomes evident that there is an issue on which metrics to choose. This is due to the fact that financial and non-financial objectives cannot and should not be measured with the same metrics. Exemplifying this, one might argue that a currency value should be taken into account for measuring both financial and non-financial issues. However, this creates several problems. Firstly, it might be difficult to find a common price for non-financial issues, such as endangered animals. Moreover, it might not be ethical or confusing to put a price tag on non-financial topics. The solution to the inequality of metrics problem is to recognize that each layer needs unique measurements and therefore choosing metrics should be individual for each layer. Although being the best method for calculating the TBL, this approach also bears the risk of metric oversaturation for people involved in non-financial reporting. Some of the most common measures for TBL calculations include personal income, job growth, employment distribution (economic), unemployment rate, average household income (social) or electricity, fossil fuel consumption or waste management (environmental) (Slaper & Hall, 2011, pp. 4-5).

2.2 Environment, Society and Governance (ESG)

The term ESG is an abbreviation and generally stands for environmental, social and governance. Therefore, one can conclude that this trend tries to encompass these three layers within corporate activities, which are visible in Figure 3. The first level, environmental issues, refers to the effect of a company's environmental systems, which include reporting among environmental issues such as the company's own carbon dioxide emissions, its efficiency and usage of natural resources like water or electricity as well as its waste and pollution management. Secondly, the societal pillar describes a company's handling when it comes to employee, customer and general society matters. Reporting issues should include information regarding medical protection, safety, development and training of workforce, quality of goods produced and customer satisfaction as well as its impact on a wider range of society. The last layer, governance, refers to rather vague issues that are connected to the management acting in the best interest of a company and its stakeholders. Therefore, reporting topics contain shareholder rights issues against hostile-takeovers, a well-experienced and ambitious board, sustainable and long-term driven compensation plans as well as measurements against fraudulent activity identification and prevention. Moreover, the concept of corporate social responsibility (CSR) is entangled and an actual part of the broader topic of ESG. Companies use CSR as a way to actively engage in specific activities to show their commitment to social and environmental issues, such as voluntary, sustainable work or increasing diversity within their workforce (Liang & Renneboog, 2020, p. 2).



Figure 3: The three pillars of ESG (Mathis & Stedman, 2023)

The main objective of ESG is to influence a company's decision-making process in a sustainable and long-term way and to create more responsibility when it comes to the three main pillars. This corporate responsibility should be fostered by disclosing and reporting upon issues surrounding environment, society and governance. Moreover, a company should pursue to sustainably optimise processes to ensure full compliance when it comes to identifying and fulfilling ESG objectives within the firm.

Evidence further suggests that satisfying and reporting on ESG matters can have a significant impact on a corporation's financial key performance indicators. Therefore, the better the published performance regarding environmental topics is, the higher the revenue will be due to more revenue streams a company can generally create and the more costs a company can save.

However, revenue and costs are not the only performance factors that are positively influenced by ESG topics. Other strongly affected KPIs include the return on assets (ROA), return on equity (ROE) as well as its market value (Weston & Nnadi, 2021, p. 2). Ortas et al. (2015, p. 1951) further show that companies can first boost their ESG performance by committing to the United Nations Global Compact (UNGC) and secondly that this increase in voluntary CSR work has a significant and positive effect on a company's revenue and ROA.

Companies can also choose third-party organizations to calculate an external ESG score for them. The main categories for measuring a company's ESG effect are its own disclosed information, reports produced by other organizations on the company's ESG activities, information shared through media channels and research conducted through interviews and surveys. The ESG score is an overall conclusion of the results gathered by the organization on a company's ESG activities. However, this overall ESG score can be separated within the three main ESG pillars and therefore more detailed results are visible. This score is usually being calculated for a listed company within the public sector and adaptations regarding industries are usually made. Some of the most common rating organizations for calculating and creating ESG scores are Morgan Stanley Capital International (MSCI) ESG and ESG STATS, Sustainalytics Company Ratings, Dow Jones Sustainability Index (DJSI), ISS ESG, S&P ESG Index and many more.

Some of the more common limitations to creating ESG scores, which could influence the rating conversely, include the size of the corporation, its geographical location and industry. Firstly, it is believed that the bigger the size of the company, the higher its resource value and further the higher its possibilities are to dedicate a larger amount of these resources to ESG activities. Secondly, the more advanced a country's regulations are regarding ESG, the stricter the assessment of the company's ESG activities will be. Lastly, every industry has its own, unique characteristics. This might lead to oversimplifications regarding the unification of ESG calculations across various industries. Another point of criticism is that ESG rating organizations use different methods to achieve their results. Therefore, ratings for one corporation can vary by quite some margin across databases of different rating firms. This in turn has been leading to questions among scholars and reporting organizations, whether external ESG ratings' validity can be assumed as being fully credible (Liang & Renneboog, 2021, pp. 9-10).

Regarding ESG reporting, it is widely believed that there are two motives for preparing them. On the one hand, companies try to position themselves closer to environmental and social topics by showing their activities regarding ESG. On the other hand, it is often seen as a kind of tool to satisfy stakeholders and to bridge unpleasant questions that might arise regarding other environmental and social topics that are not reported upon (Murphy & McGrath, 2013, p. 222).

In their study Murphy & McGrath (2013, p. 231) found that corporate behaviour regarding ESG reporting can be either completely honest and true by reporting on activities and values that are supported by the corporation's identity or dishonest through misleading stakeholders through obscured environmental and social information. The latter statement is being supported by arguments surrounding motivation to report upon qualitative or quantitative data. It is believed that companies support the idea of including majorly qualitative information as this form of data can be tweaked to the firm's own interest, therefore creating some sort of distracting effect for stakeholders.

Regulations regarding publishing sustainable, financial information and its reporting have been gained additional attention during the latest periods. However, this has also been noted as not purely being positive, as the current state of ESG disclosing and reporting regulations is widely spread and the use of specific guidelines is being explained in complicated terms. Nevertheless, it is evident that companies applying standard setting guidance within their sustainable reports currently outperform companies that avoid regulations, regarding their ESG scores. The major standard setters for guidance regarding ESG regulations can be named as the International Integrated Reporting Council (IIRC), the Global Reporting Initiative (GRI), the Task Force on Climate-related Financial Disclosure (TCFD) as well as the Sustainability Accounting Standards Board (SASB) (Liang & Renneboog, 2021, pp. 11-12).

2.3 Sustainability Reporting Frameworks

2.3.1 History and Sustainable Reporting Legislation

The disclosure of sustainable information within the annual reports of companies has its origin in the 60s and 70s in the United States and Europe, where social and environmental topics gained public interest. In Europe the first countries adopting social and environmental topics, voluntarily, within their reports were France and the Netherlands, which led to other countries, especially the German speaking countries, following this reporting trend. After several mischievous financial scandals during the 80s and their momentous social and ethical consequences, public and private investors' pressure increased regarding a regulatory change of the credibility of companies' reporting. As a reaction, the Coalition for Environmentally Responsible Economies (CERES) and the United Nations Environment Program (UNEP) installed an organization called 'Global Reporting Initiative' (GRI) with the aim to slowly, but gradually unify non-financial and financial reporting topics. However, up until the financial recession in 2008-2009, not a lot has changed regarding sustainability reporting. Therefore, the external pressure of stakeholders has been growing in designing binding regulations in terms of ESG and sustainability reporting to include as part of the annual financial report (Ioannou & Serafeim, 2017, pp. 6-7).

Following the historical background on sustainability reporting, there are a number of organizations that have developed in order to create guidelines that companies should follow in reporting on ESG topics. These organizations include the IIRC, TCFD, GRI, SASB and CDP. However, the guidelines provided by these organizations are not legally binding and therefore voluntary for companies to adopt. As a result, many legislative reporting organizations have been discussing to create one unified standard that companies are legally bound to. This is what the European Financial Reporting Advisory Group (EFRAG) has been tasked with, to create said regulative reporting standards.

The International Accounting Standards Board (IASB) is also working towards making financial accounting rules more comparable to non-financial rules. Further reactions to enforcing ESG matters into binding regulations and unifying them saw the SASB and IIRC merging into one board. However, a study, dedicated to finding the interests of each legislative participant in the arena of reporting, showed that the main driver for them is to stay relevant, rather than developing unified regulations.

Therefore, it would be more expedient if political organizations or rule enforcers would look over this arena and regulate the regulatory process to ensure true unification of sustainability reporting standards (Afolabi et al., 2022, pp. 1-3).

However, the current state sees these guidelines as frameworks to adopt for companies, that seek to report on environmental, social and governmental topics (Afolabi et al., 2022, p. 1).

2.3.2 Defining relevant sustainability reporting frameworks

Global Reporting Initiative

The Global Reporting Initiative (GRI) was established in 1997 by legal reporting authorities as a reaction to the latest environmental and social scandals of corporations at that time (Ioannou & Serafeim, 2017, p. 7). Since then, the reporting institution that aims to merge reporting regulations with the framework of the triple bottom line has grown in popularity. This is because a vast majority of firms that choose to disclose information regarding their environment, society and government use the GRI index. The popularity of the GRI framework can be explained through various points. Firstly, when it was first published it was the only real framework that companies could refer to. Secondly, the GRI guidelines were created in a cooperative way of discussion by various different stakeholders such as managers, accountants, academics or advocates. Thirdly, its approach is designed to be trial-and-error, therefore, the original framework is continuously changing and evolving as stakeholders' feedback is being integrated by the GRI. Another important point is that according to the GRI, identifying sustainable issues and processes is important, but the focus is on materializing and quantifying them in real world terms. Lastly, the GRI framework was created to ensure comparability with other sustainability frameworks in mind, such as the United Nations Global Compact or specific ISO standards (Hohnen, 2012, p. 5). Other positive effects connected to the use of GRI standards within sustainability reports include disclosing relevant non-financial data in a comprised form that is sufficient for external stakeholders as well as altered financial performance that stems from lower costs connected to equity or operating profit (Siew, 2015, p. 182).

The GRI standards include a set of required, but also only recommended guidelines that companies should make use of. These standards are generally divided into three segments. Firstly, universal standards GRI 1, GRI 2 and GRI 3. In the former the standards are defined and they furthermore contain an explanation on how to use them. Moreover, they include requirements for companies to hold in place to align with the GRI framework. Within GRI 2 companies are guided on reporting issues surrounding internal, company-related topics such as its structure, governance, internal processes, employee and reporting policy or strategy. These shed a light on the scope of the company and its unique position. The latter, GRI 3, is related to material issues that the company reports on, given its impact on sustainable matters.

Secondly, sector standards are used to describe the material impact of the company on its environment and society. The goal is to enhance sustainability reports of companies in a qualitative, wholly as well as consistent manner. These standards cover topics that begin with the most impactful issues, such as gas or oil, agriculture or water pollution.

The third set of standards contains detailed information regarding important topics, such as waste management, health and safety procedures, tax policies, etc. (GRI, 2023, pp. 2-4). As of lately, the general rules within the universal standards include GRI 4, which seeks to disclose information regarding greenhouse gas emissions (GHG) as well as matters regarding corruption (Siew, 2015, p. 182).

The targeted scope of the standards includes a wide variety of companies within all industries and sizes. This is due to the versatile standards that have been classified in cooperation with many internal responsables, but also external stakeholders. The audience of the sustainability report conducted with the GRI standards includes external stakeholders and investors, companies due to its comparability as well as policy makers (Van Hecke, 2021).

Sustainability Accounting Standards Board

The Sustainability Accounting Standards Board (SASB) was founded in 2011 and aims to increase transparency and communication between a company and its stakeholders regarding its impact towards ESG matters (Santi, 2023). The purpose of the SASB framework is to minimise the risk of damaging a company's market value through reporting on sustainability. Therefore, increasing consciousness towards how a company affects its environment and society and thereby enhancing and complementing the financial reporting aspects. SASB standards target to address specific, non-financial topics and show how they are connected to financial performance factors. The guidelines created by the SASB include operational KPIs on sustainability issues that are both industry-specific and material. Through non-financial information, it is possible to compare current sustainable performance with past results and use this value creating method to predict future outcomes (SASB, 2017, pp. 4-5).

The SASB standards generally consist of five sustainability topics that are industry and sector specific. These can be named as environment, society, human capital, business model and innovations as well as leadership and governance (Van Hecke, 2021). Environmental factors contain specific actions by a company such as the use of fossil fuels and other non-renewable resources, natural resources within production or as part of a company's waste management, which might pollute its environment as a consequence. SASB standards specifically mention that a company has to identify these impacts and its consequences, measure and relate them to the financial performance. The social dimension focuses on revealing key contacts with external parties such as customers, communes, public relations or the government. Moreover, it aims to uncover social topics regarding protection of human rights, safeguarding vulnerable groups, its effects on local society as well as sustainable pricing and marketing methods. The human capital level includes issues surrounding the treatment of employees, diversity as well as incentives, compensation and the training and promotion of employees. Within the business model and innovation, the guidelines suggest investigating environmental, social and internal topics among a company's value-creating, key processes. These include the effective and efficient design of resources and managing them in a sustainable-friendly way. The last dimension, leadership and governance, concentrates on the management and legal section of the company, regarding anti-corruption, safety or other regulatory measures (SASB, 2017, pp. 2-3).

However, these five main categories can be divided into 26 subcategories that allow for companies from different industries or sectors to choose the topics that individually suit them best (Santi, 2023).

Targeted users of the SASB framework are mainly public companies responsible to disclose material sustainability matters. However, their application is intended to be voluntary (SASB, 2017, p. 6). The main audience of the SASB standards can be named as investors and regulatory organizations (Van Hecke, 2021).

International Integrated Reporting Council (IIRC)

The IIRC framework was first published in 2013 with the aim to adopt guidelines about the unified communication of value added within a corporation that are widely accepted. After its initial publication, the framework was revised in 2020 and three main areas of frequent issues were identified during this process. Firstly, the guidelines integration within a company's unique business model. Secondly, missing guidelines on how to create an integrated, unified report and lastly, what the future of the framework would propose to be. Therefore, for the latter issue the inclusion of topics surrounding research regarding corporate reporting future as well as technological developments were vitally important. In 2021, the IIRC revised framework was released. It was intended to include simplified explanations on how to successfully develop integrated reports, the required internal processes regarding quality and integrity as well as focusing on the equal disclosure of key results and possible risks regarding market value. Later that year, the IIRC and the SASB merged together to form the Value Reporting Foundation (VRF). This organization was created in order to provide corporate entities with value and business drivers that make sustainability matters more quantifiable and therefore relatable to the entity's performance (Deloitte, 2022).

The overall objective of the framework is to contain guidelines for companies to identify the key elements of an integrated report and how to use them in order to create one. The purpose of integrating the IIRC framework within a company's reporting process is to give them a tool regarding value creation, safeguarding value against erosion for financial and non-financial issues. Furthermore, the guidelines do not include recommendations on KPIs. Therefore, corporate managers have to decide on their own which issues are regarded as material and in which form they are reported upon (IIRC, 2021, pp. 10-11).

Its scope to highlight the creation, preservation and erosion of value can be divided into six dimensions. These can be named as financial capital, manufactured capital, human capital, social capital, relationship capital and natural capital. The audience of the IIRC framework and the resulting reports are determined to be stakeholders that should be guided within their overall economic decision-making process on investing (Van Hecke, 2021).

Task Force on Climate related Financial Disclosure (TCFD)

The TCFD's responsibility is to create recommendations on transparent and enhanced reporting of financial and material risks that are connected to climate-related topics. Therefore, the TCFD is a more forward-looking organization that tries to identify future risks regarding sustainability reporting and its impact on a corporation's performance (Santi, 2023).

Historically, the Task Force on Climate-related Financial Disclosure was brought to light in 2015 by the Financial Stability Board (FSB) and its initial aim was to identify firms' effects on the global climate and increase comparability and benchmarking of published climate-related reports. This is to establish awareness on both corporate and stakeholder side regarding climate and financially intertwined topics and as a result make better and more sustainable, long-term decisions (Meyer, 2022).

Their framework contains four basic recommendations, about governance on sustainable investment opportunities, a company's climate-related risks and effects, its risk management to minimize financial impacts and metrics and targets to give sustainability related topics a unified measure (TCFD, 2021, p. 4). The TCFD's approach includes firstly principles that are used to effectively disclose relevant sustainable information. These are in place to ensure that the recommendations are fulfilled and further to guide decision-making organs within companies to increase their understanding non-financial impacts on financial performance and vice versa. A detailed overview on these principles can be taken from Figure 4. As a whole, the principles are designed to intertwine sustainable matters to their individual position on the overall TCFD recommendations. The framework secondly uses a set of cross-industry related metrics that all actively reporting corporations should adopt if possible. These metrics do not include equal sets of units for each KPI and therefore measurements can vary. However, the main objectives are for stakeholders to obtain broader information regarding climate-related metrics and to enable enhanced comparability between these measurements across various industries. Within the TCFD's financial sector metrics all types of companies are able to report using their specific guidelines. Even though, some industry sectors are especially encouraged to include more detailed information, for example how their greenhouse gas emissions (GHG) are related to their investment strategies (TCFD, 2021, pp. 8-9).



Figure 4: Seven principles for effective reporting (TCFD, 2021, p. 8)

The users of the TCFD determine all companies to use their recommended guidelines due to the importance of climate-related issues on their financial and long-term strategic performance. However, especially companies that hold public debt or equity, asset managers as well as owners, public and private pension plans are recommended to use this framework.

This is because their audience, such as potential investors or regulators, gets a better understanding through considering the risks and performance metrics intertwined with relevant climate-related topics (TCFD, 2017, p. 17).

Carbon Disclosure Project (CDP)

The Carbon Disclosure Project (CDP) was created in 2000 as a global non-profit organization with the objective to serve guidance on developing a voluntary framework regarding sustainability reporting. The organization developed out of the need to address climate-related threats in combination with corporate activity, which were widely ignored by managers at that time. Its initial target was to persuade companies to reduce their greenhouse gas emissions (GHG), which had little connection to the disclosure of financial and non-financial information. However, after not reaching its initial goals, the leaders of the organization changed course and targeted to create specific guidelines that companies should use in order to report on their internal and external impacts on carbon emissions. Among the first early adopters of this relatively new reporting field were big and powerful oil and energy conglomerates such as BP or Shell (Janzwood, 2017, pp. 4-5). Nowadays, companies are encouraged by the CDP framework to include topics, such as their contribution to decreasing emissions, pollution or other directly damaging activities affecting the environment, within their sustainability reports. With over 13 000 participations each year, the organization has risen from a small NGO with little support to an internationally accepted sustainability reporting framework (Lopez, 2022).

Its core modules are divided into three categories, measure, commit as well as action and impact, that are intertwined and should be seen as one connected process. The first one, measure, can be defined as companies quantitatively identifying areas of negative environmental impact and to be able to find ways to reduce these. Secondly, commit is understood as stating vital targets that are in line with the overall objective to decrease climate change by minimizing a company's environmental footprint. Lastly, within action and impact companies are committing to their previously identified areas of sustainability issues and to minimize them through activities that influence these factors and to reach their sustainable targets. The reporting framework furthermore includes four recommended dimensions to include in a firm's sustainable reporting structure, such as information regarding the consumption and generation of energy, emissions created throughout its value chain, company significant sustainable risks as well as solutions to positively impact the environment in the future. However, it is more important to the CDP that firms include the main dimensions within their sustainability reports rather than additional recommendations (CDP, 2021, pp. 2-3).

The intended users of the CDP framework are data providers, users and organizations that are intertwined with the former two. In that sense data providers can be identified as SMEs that report on the sustainability issues and the main as well as additional categories of the guidelines. The other group, data users, can be defined as organizations using the reported information to make informed decisions involved with the providers. Lastly, organizations intertwined are third-party service providers such as environmental consultants or data collecting agencies (CDP, 2021, p. 6).

2.3.3 External rating organizations

ESG or SR rating scores distinguish themselves from other credit ratings through their ability to express qualitative data in a quantitative way. Therefore, these sustainable scores can be defined as a summary or compression of gathered and analyzed qualitative information upon ESG topics that is thereafter being expressed in a quantitative manner through a scoring method. Furthermore, credit ratings shed light on more general topics, such as creditworthiness of the company taking into account more than just sustainable issues. Even though, both ESG and credit ratings are being conducted by third-party, external organizations, another important difference between those scores is that ESG rating providers use a business model that can be compared to a subscription model. Therefore, the more published information the ESG score should contain, the more resources a company has to use in order to gain access to that additional data. Moreover, the lack of statutory regulations also plays a major role when it comes to defining ESG score organizations. Therefore, a study conducted by SustAinability found that in 2018 companies around the globe ordered ESG scores from approximately 600 different providers. Even though, within the past couple of years as the market seems to increase, the number of organizations is shrinking due to a consolidation of the ESG score providers. Some of the biggest acquisitions of ESG providers include MSCI's takeover of GMI Ratings in 2014, Morningstar buying Sustainalytics finally in 2020 as well as S&P and Moody's taking over RobecoSAM in the same year. The biggest ESG score providers have approximately between 4 000 and 12 000 active customers (Mazzacurati, 2021, pp. 106-108).

Morgan Stanley Capital International (MSCI)

To arrive at their ESG scores, MSCI uses the most relevant, publicly available data to determine the industry and company specific risk of a company. The aim is to investigate in which way a company handles these risks that have the potential to increase its operating and strategic volatility both in short and long term. Furthermore, it compares a company's corporate governance to its peers and therefore arrives at a result with high comparability among specific industries and branches.

The MSCI conducts its scoring method through gathering information among 35 key issues that impact a company's environmental, social and governance landscape the most. These pillars are weighted differently among companies with different backgrounds or in other industries. The result is typically a score between AAA and CCC that reflects the overall ESG performance of a company (MSCI, 2020, pp. 4-6).

Sustainalytics

The ESG rating through Sustainalytics is designed to disclose a company's risk to material and industry specific risks as well as its corporate governance regarding environmental and social topics. Sustainalytics measures a company's exposure to external ESG risks by investigating publicly available data, which includes published annual and specific sustainability reports. The organization furthermore reviews data that is publicly available through online and media outlets as well as controversies that are rated according to their severity on an overall ESG basis and engagement processes through issuer feedback (Sustainalytics, 2020, pp. 1-3).

3 Literature review

3.1 Sustainability Reporting

3.1.1 Definition and History of Sustainability Reporting

Sustainable Reporting (SR) is a form of non-financial reporting that enables companies to convey their progress towards goals of a variety of sustainability parameters, including environmental, social and governance metrics, as well as risks and impacts they may face, at the moment or in the future (GEP, 2023).

The history of sustainable reporting is comparatively recent to financial reporting. The non-financial performance or sustainability reporting (SR) first emerged in the 1990s (Hohnen, 2012, p. 3). Few companies engaged in SR in the 1992 UN Conference of Environment and Development (UNCED) conference. Most reports focused on environmental policies and performance to respond to increasing media attention to environmental problems. The primary outcome of the UNCED conference was to encourage business organizations to report annually (Hohnen, 2012).

Rahi et al.'s (2022) content analysis shows that there is a significant difference between academic research and practice regarding SR and MCS. The authors revealed that practitioners handle SR as legitimacy and MCS as an internal perspective. They further explained that SR has legitimacy to reflect the internal governance from transparency, legitimacy, accountability, and control perspective targeting the public, especially the stakeholders (Rahi et al., 2022, p. 562). The literature review of Traxler et al. (2020) revealed that the interplay between sustainability reporting and management controlling systems is still in its early stages and therefore increasing relevance is given to the topic.

3.1.2 Critics and challenges within Sustainability Reporting

Sustainability Reporting frameworks

In the current stage of sustainability reporting there is a significant discrepancy due to the use of different standards and guidelines that are in place for reporting and disclosing about sustainability issues (Bosi et al., 2022, p. 2).

This divide between the various SR frameworks is shown in the in-depth study conducted by Afolabi et al. (2022, p. 19). The main goal of the research study was to display the actors, influencing the main stage of sustainability reporting, how they are intertwined and how each of them affects this topic and the way forward. The authors use a specific metaphor as the 'arena' to describe the main organizations that create guidelines and therefore actively shape the topic of sustainability reporting. Inside of that arena, and also influencing sustainability reporting in some way, are other actors, such as legal or governmental entities. Within their study they found that the interests of each actor are of utmost priority and that defending one's own organization's benefits is seen as vitally important. Moreover, their overall objectives, research and future developments point in opposite directions. Therefore, real harmonization by defining unified sustainability reporting guidelines as part of a collaboration seems nearly impossible.

The research further suggests that the guidelines provided by GRI are of the most significance to companies due to their focus on materiality. They provide companies' stakeholders with enough valuable data about sustainability matters to affect their decisions in an informed way about companies' credibility regarding sustainability efforts. The current guidelines provided by the main standard setters, however, are accused of lacking in terms of showing enough sustainability performance KPIs to stakeholders. Therefore, the study concludes with a suggestion to the main actors within the current arena of sustainability reporting, to work together on finding unified rules among them as well as changing and optimizing the current setting of sustainability reporting guidelines (Afolabi et al., 2022, p. 20).

If these above-mentioned discrepancies between the guideline setters exist in practice and how they affect companies' sustainability reporting extent has been researched by Albu et al. (2013, p. 733), where four large sized European tech-companies were investigated upon. Their results show that while all of those companies report on sustainability issues, they prepare their reports on different, company specific, aspects. For example, SAP AG uses the GRI guidelines as their main index, whereas the remaining three companies do not. Furthermore, while all of the companies state that water will be one of the future's most significant resource limitations, their focus is shifted more towards reporting on topics that follow an already existing guideline, such as greenhouse gas emissions (GHG) through the CDP. There are two main factors influencing these discrepancies and varieties of reporting on sustainability issues. One reason is that the sheer number of frameworks makes it difficult for companies to find a common and comparable way of reporting. The other reason is that there are various factors and actors, outside of the guideline setters, that influence the process of sustainability reporting (Albu et al., 2013, pp. 736-737).

ESG scores

In order to measure the sustainability and societal impact of a company, non-financial information is often defined as ESG information (Deloitte, 2021, p. 2). An ESG score objectively measures or evaluates a company, fund or security concerning ESG risks (CFI, 2022). It is a measurement of a company's level of sustainability, and ESG scores are becoming an increasingly important factor for global business focus on a sustainable economy (Emerick, 2023). According to a report by the G&A Institute (2022), 96% of S&P 500 and 81% of Russell 1000 have enhanced their ESG and sustainable reporting and profiles. ESG ratings or scores are becoming very important when investors analyse their potential future investments, and ratings can influence a company's share price (KPMG, 2022). Even though several rating tools are available in the market to measure ESG performance, very few of these reporting tools disclose the criteria and methodology used behind their ESG measurements (Siew, 2015, p. 186).

Nikkhoo & Lindbo (2021, p. 43) Nordic firms' study found that increased ESG scores lead to better accounting and market-based financial performance. According to the MSCI research of Lodh (2020), companies with higher ESG scores, on average, have lower cost of capital compared to those who have lower ESG scores. Velte's (2017, p. 175) study found that ESG performance positively impacts return on assets. ESG scores provide a quantitative assessment of the company's actions to protect the natural and social environment. These scores are widely accepted and facilitate comparisons between companies. However, all ESG pillars do not have the same impact on the final scores.

These scores have focused more on environmental and governance issues than social ones. Further, these ESG scores are highly divergent among the external agencies who provide those, and what they present is still in doubt (Clément et al., 2023, p. 4).

There are also hidden drawbacks that might mislead stakeholders or potential investors in analyzing these ESG scores. The first one being that there might be a size paradox. This means that the bigger a company and the more resources it has to spend on sustainable topics that affect the ESG score, the better the score will be. The location of the company might play a vital role as well, as the more advanced a country's ESG rules, the stricter the scoring method and the harder it will be to get a comparable score with countries with less strict regulations. Thirdly, every industry is affected by different sustainability issues, therefore creating comparability among different industries is nearly impossible. These discrepancies within the calculation of ESG scores lead experts to doubt the full credibility of ESG ratings and their true value to external stakeholders (Liang & Renneboog, 2021, pp. 9-10).

Sustainability Reporting Motivation

“Over the past few decades, the attitudes of some companies have changed, rejecting the agency view of Friedman (1962,1970, cited in Finch, 2005, p. 9) and instead embracing stakeholders as per the study of Freeman (1984, cited in Finch, 2005, p. 9) and sustainability concepts in their business practice.” Further, this has been motivated by the belief that adopting sustainability practices, in the long run, will lead to the improved financial performance of the firm McWilliams & Siegel (2001, as cited in Finch 2005, p. 9); Pava & Krausz (1996 as cited in Finch 2005, p. 9), increased competitive advantage Russo & Fouts (1997, as cited in Finch 2005, p. 9); profit maximisation McWilliams & Siegel (2001, as cited in Finch 2005, p. 9); and the long term success of the firm Freeman (1984, as cited in Finch 2005, p. 9).

Adams & Frost's (2008, p. 291) study found motivation for sustainable reporting as per interviewed companies for business, moral and practical reasons for commencing to report on sustainability issues. Those reasons included the high-impact nature of business operations on the environment, being accountable to, and building trust with key stakeholders such as NGOs and local communities, influencing key leaders and key opinion formers, differentiating each company from competitors to increase market share and improving profitability and winning with the integrity model and GRI guidelines etc. (Adams & Frost, 2008, pp. 291-292). Further, the study found that sustainable reporting has improved a company's profitability, and its ethical policy attracted good staff. Collecting data was a catalyst for change towards improved performance when data became visible because KPIs broken down by business units resulted in competition between the business unit managers to improve each unit's performance (Adams & Frost, 2008, p. 292).

“Lack of knowledge and understanding are critical barriers to incorporating social and environmental considerations into decision-making. Firstly, some people incorrectly assume that environmentally friendly options are always expensive. Secondly, the nature of the decision required was sometimes misunderstood (Adams & Frost, 2008, p. 298).” Understanding what sustainability means to an organization and how it engages its priorities is also a key constraining factor for sustainability integration (Adams & Frost, 2008, p. 299).

A study conducted by Siew (2015, pp. 187-188) identifies various critiques surrounding the most used sustainability reporting standard, which is the GRI. One area of criticism that was especially researched upon was a company's motivation to disclose sustainability issues and report on them. The findings on this topic suggest that the company's intention to perform sustainability reporting are first and foremost to please stakeholders and avoid negative publicity, rather than specifically mentioning sustainability issues and reporting as one of their most important internal drivers. For Pucker (2021) one of the reasons for this shift in motivation is that there has yet to be seen an attempt to harmonize the various sustainability frameworks. Due to this lack of comparability and clarity, companies are tempted to use sustainability reporting as some sort of marketing tool, which highlights the disclosed topics, but deliberately hides sustainability topics that are uncomfortable to the company.

3.1.3 Developments within Sustainability Reporting regulations

The European Green Deal is expected to transform the EU into a modern, resource-efficient and competitive economy to overcome climate change and environmental degradation by ensuring no net emissions of greenhouse gases by 2050, economic growth decoupled from resource use and no person and no place left behind (European Commission, 2023). The European Commission has already set up policies to reduce greenhouse gas emissions by at least 55% by 2030, compared to 1990. In order to meet the above expectations, it is very important to direct investment towards sustainable projects and activities. Therefore, for the broad mass of people to understand what sustainable activities are and what they are not, a common classification system has been created. It is called EU taxonomy, and it defines which activities are environmentally sustainable (European Commission, 2023). In order for an economic activity to be environmentally sustainable, it must contribute substantially to one or more of the six environmental objectives of taxonomy regulation and comply with relevant technical screening criteria, not harming any environmental objective and meet minimum social safeguards (Pettingale et al., 2022).

Taxonomy signals enhancement of mandatory sustainability reporting in the EU and capital investment for green activities. The EU taxonomy improves and standardizes sustainability reporting. Further, taxonomy supports Sustainable Financial Disclosure Regulation (SFDR) and Corporate Sustainability Reporting Directive (CSRD) (Pettingale et al., 2022). Corporate Sustainability Reporting Directive (CSRD) entered into force on 5th January 2023 and CSRD revised the Non-Financial Reporting Directive (NFRD) (European Commission, 2023). EU law requires all large companies as well as listed SMEs to report on information on what they see as the risks and opportunities arising from social and environmental issues, and on the impact of their activities on people and environment. So, this directive will apply to approximately 50 000 companies in Europe (European Commission, 2023). Companies already subjected to NFRD will have to report FY2024, followed in FY2025 by large companies not already subject to NFRD, listed SMEs in FY2026 and non-EU companies FY2028 (O'Dochartaigh, 2022, p. 4). European Sustainability Reporting Standards (ESRS) are applicable when reporting companies subject to CSRD and new rules apply in the 2024 financial year for reports published in 2025. According to the Directive, it is mandatory to audit the sustainability information, which can be provided digitally (European Commission, 2023).

These new rules of CSRD ensure that investors and other stakeholders will have access to assess investment risks arising from climate change and other sustainability issues. Further this will create a culture of transparency about companies' impact on the people and the environment. However, most companies will have to incur the cost of providing various information to investors and other stakeholders, but new CSRD aims to reduce cost over the medium to long term by building harmony when reporting the essential information (European Commission, 2023). However, SFDR puts pressure on investors, and CSRD puts it on reporting companies (Pettingale et al., 2022). The main challenges of the new regulation are that the companies have to invest in their processes and structures to improve reporting, which will increase cost, and CSRD is still vague or raise important questions with regard to the alignment of existing frameworks and standards (Baumüller & Grbenic, 2021, p. 379).

O'Dochartaigh (2022) states that CSRD will be far more challenging than NFRD. The author explained that firms would need to supply scope 3 GHG emissions reporting data. Scope 3 emission refers to indirect emissions from up and downstream activities along the value chain. For example, for many firms in the professional services or the consumer goods industries, scope 3 emissions are very high and difficult to measure (O'Dochartaigh, 2022, p. 4). The Regulation Ready model of O'Dochartaigh summarises the five actions firms must take to prepare for new regulation. Those actions are Resource; dedicating financial and human resources to ESG management and reporting, Communicate and Coordinate; connecting top-down vision with bottom-up data collection to make ESG a whole firm effort, Inside-out and Outside-in; measuring all major ESG topics to futureproof for forthcoming regulation, Collaborate to Innovate; Engage within and across industries to tackle challenges and support innovation (O'Dochartaigh, 2022, p. 5).

3.2 Controlling

3.2.1 Definition and History of Controlling

“Control, or controlling, is one of the managerial functions like planning, organising, staffing and directing (Karthikeyan, 2019, p. 211)”. “As noted by EFL Brech control is determined as checking current performance against predetermined standards contained in the plans, with a view to ensure adequate progress and satisfactory performance (cited in Karthikeyan, 2019, p. 212)”. According to Harold Koontz “Controlling is the measurement and correction of performance in order to make sure that enterprise objectives and the plans devised to attain them are accomplished (cited in Karthikeyan, 2019, p. 212)”. “Management control is the process of assuring that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives” (Anthony, 1964, p. 19). According to Karthikeyan (2019), the modern concept of control is a foreseeing action. However, the earlier concept was to use it when something went wrong or to detect possible issues in beforehand.

Kovaleva et al. (2018) investigated the historical stages in controlling development. A fifteenth-century attempt to solve the state management tasks with the use of the controlling ideas was initiated (in the court of an English king the position of “Controller” was established). In 1778, to manage the state economy and to control the use of funds in the USA, the department “Controller, Auditor, Treasurer and six Commissioners of Accounts” was established.

Then the position of “controller” was established by the companies Atchison, Topeka and Santa Fe Railroad as well as General Electric in the USA between 1880 and 1892. Controllers had to deal with financial economic issues and perform audits. This was due to the specifics of American corporate legislation that provided only two governing bodies. A general meeting of shareholders and a board of directors that required information management. In the twentieth century, however, functions of controllers were limited to registration of information which enabled them to make reports for managers. During the great depression accounting and reporting were transformed from tools of control into means of overcoming future problems. A special role of development of controlling systems was played by “The controllers Institute of America“ established in 1931 (Currently Financial Executive Institute). In 1944, a scientific research institute "Controllershship Foundation" (presently "Financial Executives Research Foundation") that significantly contributed to the development of controlling in the USA was founded. Furthermore, an organization called IMA ("The Institute of Management Accounting") that deals with the standardisation of management accounting was established (Kovaleva et al., 2018, p. 167).

3.2.2 Management Accounting and Controlling

As noted by (Bajnai, 2021, p. 8) management accounting as a term is used by countries associated with the Anglophone culture that is British and American, while controlling term is used by German speaking countries and more closely related areas. “In the 1950s, with American economic expansion, control began to spread in many European countries. Further development of controlling was manifested in the dualism of its directions: Anglo-Saxon (American) and European (German) (Kovaleva et al., 2018, p. 168)”. Both of these terms seem similar but there share differences due to these two concepts’ different development and in different economic and cultural contexts. Bajnai’s (2021, p. 11) study concludes that controlling is a function and system with broader responsibilities, with a greater emphasis on strategy, closer to management. On the other hand, management accounting is more closely related to accounting, operational activities. However, those terms are equally characterised by forward-looking and long-term, sustainable objectives. As noted by (Cambalikova & Misun, 2017, p. 219) traditional controlling techniques are budget and performance audit. Although, controlling is often thought of as a financial criterion, the author highlighted that managers must also control production and operational processes, procedures for delivery of services, compliance with company policies and many other activities within the organization.

3.2.3 Management Control Systems and Sustainable Control Systems

According to the definition of (Simons, 1994, p. 5) management control systems (MCS) are formal routines and procedures such as plans, budgets and market share monitoring. The second feature is that information-based systems that senior managers use for various purposes such as to share strategic domain, to communicate plans and goals, to monitor achievement of plans and goals, to keep informed and inform others of emerging developments. The development of management control systems with the effect of psychological and cultural aspects are vital in addition to the formal system of accounting information (Carenys, 2010, p. 1). Further, Simons (1994, p. 6) mentioned that the information systems become control systems when they are used to maintain or alter patterns in organizational activities.

The management control system seeks to align in the decision-making process and influence the behaviour of organizational members to increase the chances of improving organizational performance (Carenys, 2010, p. 13). Lueg & Radlach (2016) show that MCS are unable to appropriately address all relevant aspects of sustainability development such as environmental responsibility. Social responsibility is less addressed frequently and only few organizations implement sustainable MCS to address all aspects of sustainable development.

“Sustainability management accounting controls essentially extends organizational information and decision-making to include social and environmental measures in addition to conventional economic performance. Sustainable control systems (SCS) regard the combination of management accounting tools put together to meet sustainability performance outcomes by influencing the practices of individuals within the firm” (Johnstone, 2019, pp. 29-31).

Johnstone (2019) highlighted the importance of holistically capturing the dynamics of SCS as most studies within MCS focused on either system design or use and this will limit the continual redesign of SCS in accordance with an evolutionary regulative environment. The author concludes that “Development of SCS rests not only in controls embedded within system design but also the system users” (Johnstone, 2019, p. 56). Studies into sustainable accounting as a social practice require theoretical perspectives that recognize the individual employee’s sustainability values in addition to organization values. The author finds that building on the competence of individual employees at the operational level will result in potential for sustainability performance outcomes to exceed organizational and generational boundaries. It is further emphasized that a critical approach which recognizes governance, accountability, and responsibility structures in the design of SCS rather than using traditional hierarchical control.

This is mainly because SCS are products of increasingly complicated multi-level governance architectures where standardized systems are not enough to address local sustainable concerns (Johnstone, 2019, p. 56).

Wijethilake’s (2017, p. 580) study found that the SCS are positively associated with corporate sustainability performance. The author has examined the mediating effect of SCS under three sustainability strategies and revealed that environmental and social strategies had partial mediation and no mediation with economic strategy. Battaglia et al.’s (2016, p. 223) study focused on the role played by SCSs in promoting and hindering sustainability integration into organizational strategy and confirmed that the development of formalized SCSs such as sustainability report, sustainability annual plan etc., and their integrated adoption tends to support the integration of sustainability into organizational decision-making process. Further, analysis showed that the concrete adoption of the instruments and the strong commitment from the top managers cannot guarantee the effectiveness and stability of the integration process, especially when a company is losing money.

3.2.4 The traditional and modern roles of the controller

Educational background

A controller's typical educational background stems according to a Brazilian study from a postgraduate degree focusing on the subjects of accounting, economics, business or engineering of at least three years. Furthermore, controllers also typically have some prior knowledge from internships or part-time works, which add up to around five years as well as some foreign language skills of at least speaking English well (Ferreira et al., 2021, p. 3).

Financial controller

Financial function is an ambiguous concept, the terms management accountant and financial controller are often used interchangeably and there is a debate around the definition of the profession and roles of the controller in contemporary literature (Chaniotakis, 2022, p. 10). Financial controllers come from many backgrounds and perform many activities (Graham et al., 2012, p. 85).

According to Waelter et al. (2018, pp. 3-4) there are four functions that controllers are to carry out as part of their profession. Firstly, stewardship, which can be explained as part of risk management and asset value protection. Secondly, the role as operator, where this role is connected to ensuring both effective and efficient operations from a financial perspective. These functions are the basic, more traditional, tasks controllers have to fulfill as part of their job description. There are, however, other functions that have become not only desiring to the controllers themselves, but also the company. Therefore, controllers either take a strategist function, where they prepare and analyze data in order to affect management's long-term decision-making process or they take a more detailed, operational part in optimizing internal processes as a catalyst. Their study has come to the conclusion that the role of the controller is still majorly held with traditional, manual tasks, rather than helping to proactively support the management in their decision-making process (Waelter et al., 2018, p. 5). This is also supported by De Loo et al.'s (2010, p. 301) research results on the activities of the controlling profession. They also found that tasks such as reporting or maintaining MCS can be classified as traditional internal and risk management activities and that the majority of controllers are working on those specific tasks. However, in order to deal with future challenges regarding long-term value creation and tackling sustainability issues regarding their adoption into business processes, companies should increase the controllers' strategic and catalytic influence (Walińska & Dobroszek, 2021, p. 7141). Therefore, the optimal state of the financial controller as described by Gänßlen et al. (2012, p. 5) is that the controller should be a sparring partner to the management perspective, prepare and support strategic decision-making in a proactive way.

This is further being elevated by Graham et al. (2012, p. 84) who suggest that the role of financial controller has not transformed from "bean-counter" to "business partner" in recent years as the emphasis of the number element of the job is still being required. Instead, the role has enlarged, incorporating some of the more forward-looking elements, which are concerned with management of the business as a whole and of individual projects. The author further emphasised that the developing role of controllers has not much replaced traditional tasks of reporting and control but increased workload.

The author argues that financial controllers need to be proactive yet reactive, be strategic yet detailed, be consultants and line managers.

Functional controller

The more operational and process-oriented view rather than the holistic view on controlling stems from the increasing popularity and the resulting shift in focus to foster internal processes, such as logistics, distribution, sales or marketing (Walińska & Dobroszek, 2021, p. 7141). Therefore, the profession of functional controllers is far more connected to the various departments of a company. This means that each function of a company has a single or a set of controllers that overwatch the financial data regarding this specific section of the company. They are responsible for budgeting and planning each sector's specific resources and costs with the goal to optimize each department's contribution to a company's performance. They directly report their operational data to the COO or CFO or a separate controlling department (Kublash, 2019).

ESG/Sustainability controller

The profession of an ESG controller can be understood as ensuring that all necessary details and information regarding ESG regulations are complete and accurate in order to disclose them as part of the annual report or separately as a sustainability report. The differences to traditional controller tasks are firstly that data gathered, prepared, and analyzed is strictly non-financial and secondly that the regulations to these sustainable details are rather vaguely formulated within different frameworks. This, however, is believed to be changing in the future, as reporting on specific ESG metrics and disclosing sustainable information will be regulated much stricter than in the past. At least this is the objective of the new European legislation on sustainability reporting, called the Corporate Sustainability Reporting Directive (CSRD). Therefore, as reporting on sustainability matters becomes mandatory, at least in Europe, companies are increasingly getting involved in finding and hiring personnel with the right qualifications to tackle this new legislation (Kelly, 2023).

In theory, an ESG controller's responsibilities can be named as being up to date on the latest ESG and sustainability reporting guidelines, which will become mandatory in the future. Furthermore, ESG controllers will need to make a gap analysis to be able to determine where current and future reporting topics deviate. This is to know which sustainable reporting topics are ahead, to enable the company to measure upon these topics, gather data to be able to enclose them into their reports. As a consequence, a gap analysis is mainly necessary to ensure a better and smoother integration of new sustainable reporting issues into the company's processes. The tasks of the ESG controller include finding, exchanging and integrating the optimal combination of key performance indicators that fully cover the legislative disclosure of sustainable issues. Moreover, as an ESG controller, one needs to minimize the risk created by ESG topics through predicting them from the data gathered. The main difference between an ESG controller and an ESG analyst or expert is that the former has both financial and operational processes in mind, while the latter concentrates on projects surrounded by ESG or climate topics' influence on the company's strategy (CrossCountry Consulting, 2022).

Within the study of Renaud (2014, pp. 88-89) the author found specific environmental management control functions of the controller surrounding carbon emissions and their integration into sustainable reporting. Firstly, the traditional controller roles as a carbon auditor and as business partner. The former function includes gathering data and thereafter reporting to seniors and the latter one he/she proactively contributes to supporting managements' decision-making process by preparing sustainable budgets, plans of action, controlling tools and reporting them as part of performance meetings. The more modern roles of the sustainable controller include the functions of the carbon translator, in which he/she needs to acquire new skills in terms of reading, understanding and translating environmental, more specifically carbon, language into financial data and anticipate their influence on company internal processes. In practice, these controllers use their own scorecards to measure set goals and calculate budgets in their own way, which deviates from traditional plans and budgets. Furthermore, as an external agent, the controller becomes an expert in understanding and optimising suppliers' environmental performance.

Furthermore, Kerr & Rouse's (2015, p. 204) study suggests that organizations that support sustainability and at the same time satisfy a wider range of stakeholders are more likely to integrate the TBL into MCS such as a sustainable balanced scorecard. Organizations that have significant social or environmental impacts tend to do so.

In practice, job listings with the exact words, 'ESG Controller' are extremely scarce. Instead, companies seem to hire people as project managers and expect them to solve issues surrounding ESG reporting and disclosure as part of a specific project. Regardless of the industry and branch, these jobs include similar responsibilities. For example, gathering data on the latest regulations on ESG-related disclosures and coordinate them with the company's latest guidelines, help to actively progress new standards regarding external reports, guide internally as a bridge between finance and operation by supporting internal functions to gain data, analyse and report, gather and calculate data surrounding climate-related topics such as greenhouse gas emissions, carbon emissions, etc. Job listings on pure 'ESG Controllers', however, include tasks, such as responsibility in terms of ensuring and disclosing ESG matters, researching upon evolving ESG disclosing issues and their effects on the company's current sustainability reporting, etc. (Kelly, 2023).

4 Methodology

4.1 Research philosophy

The word “philosophy” has its origins within the Greek language and its meaning can be described as the attraction to wisdom. This means that philosophy is above everything trying to explain circumstances around the major topics of knowledge, reality as well as values. Its purpose is to answer questions within these specific, philosophical areas through taking a rather analytical and systematic approach towards research by collecting findings and results and connecting them to the research question (Kenaphoom, 2021, pp. 660-661).

One key area, as already described, within research philosophy is knowledge. Knowledge can be described as a tool that humankind uses to gain insight into unknown topics, to explain certain phenomena, learn from it and use it as a way to develop and create its own future. The unique way of communicating, transforming and developing knowledge is what distinguishes humans from other species on earth. Knowledge can be gained more practically, by either chance, such as ancient humans eating leaves as a way to deal with food poisoning, or by trial and error. This means that people solve problems by finding multiple ways of solutions, trying them and seeing which of those fit best (Kenaphoom, 2021, p. 658).

A more modern view of knowledge is that topics such as history and cultural background play an essential role. This rather social view on gaining knowledge assumes that social phenomena spur from human interaction which is influenced by many different facades of social life. These topics include a person’s living situation, cultural background as well as the type of relationship to other people. It is believed that knowledge does not transfer evenly throughout humankind, instead, each and every person, due to everybody’s different societal background, has a different view on reality. Therefore, knowledge is being distributed differently across society and generalisations must not be used to explain social phenomena (Burr, 2015, p. 223).

Research philosophy partly explains, why there are multiple ways of conducting studies as researchers. Therefore, a research study concerned with some quantitative aspect of a corporation will have a different process, outlay and view on research in general than a thesis where the main targets are underlying feelings, emotions or values of a societal aspect (Saunders et al., 2012, p. 128).

However, philosophy does not only determine the view and attitude towards research in general, but more specifically also on the aspect of how researchers view their own reality, which is connected to ontology and how knowledge is being created as part of their epistemological stance (Mauthner, 2020). Furthermore, as Saunders et al. (2012, p. 129) describe it, a researcher’s values are also part of this consideration within research philosophy as part of their axiological view.

These research philosophies can be connected to the already mentioned, general views on research, which are positivism, interpretivism and pragmatism, also known as paradigms.

4.2 Research paradigms

A paradigm can be defined as a general collection of belief systems that is concerned with researchers' view on reality (ontology), how they view themselves and their potential research issue within the already known (epistemology) and how they impact their study themselves (axiology). As Guba & Lincoln (1994, p. 107), however describe, there is no one-size-fits-all solution, therefore, the set of beliefs of each and every researcher needs to be argued for to be confirmed as valuable.

One of the main systems of belief is the positivistic view on reality, knowledge and values. Positivism, historically, spurs from a movement away from believing in the uneducated opinions of the royal society to understand the nature of reality and the creation of knowledge through meticulously described empirical experiments of phenomena. Therefore, one of the main goals of positivism is to find explanations for real-world phenomena and try to predict and control them in the future through revealing cause-and-effect relationships between various variables (Park et al., 2020, p. 691).

The other main paradigm is being defined as interpretivism or qualitative research approach. Rather than finding revealing causal relationships, interpretivist researchers try to make sense of social phenomena through studying the subject's intrinsic experiences, beliefs, emotions, values, etc. As a result, interpretivist researchers typically interact closely with their participants to get access to these intrinsic values (Tubey et al., 2015, p. 226).

Another paradigm, critical theory or realism, has evolved out of the criticism for the above-mentioned paradigms. Its objective is to overcome those critically mentioned downsides of positivism and interpretivism by combining coherent elements of the two paradigms into a single theory. This means that while positivists belief in one single reality and interpretivists argue for a world of multiple realities, realism realises that neither can exist without the other, meaning that there must be one reality that can be seen and therefore influenced in multiple different ways. Knowledge, on the other hand, is not fully objective under a realistic view. Moreover, it recognizes that values are one factor influencing research, however, it accounts for them in a conscious and objective way. The method that researchers typically use is a mixed one, where data is collected in a quantitative way and thereafter analyzed qualitatively to be able to answer the research questions. As a result, under realism, both qualitative and quantitative methods are valid and necessary tools to fully understand the underlying research phenomena (Krauss, 2005, pp. 761-762).

4.2.1 Ontology

The first of the three main philosophies that are interrelated with each other and that researchers have to consider as part of conducting their studies, is ontology. The objective of this theory is to identify whether the research object's reality has to be considered as stand-alone and external or if there exist multiple realities, where each can have a different influence on the research object (Bryman & Bell, 2011, p. 20). Under the positivist paradigm, researchers believe that there is only one existing reality, which can be quantified, analyzed and explained. Therefore, positivist ontology uses causal relationships between measurable variables to understand objective and quantifiable phenomena (Park et al., 2020, p. 690).

In an interpretivist view, every research participant is believed to have their own and individual reality and consequently under a positivist and experimental approach it would not be possible to answer social, interpretivist questions. This can be put into picture when looking at the different stakeholders within a company. Each role has its individual purpose and therefore creates different views, opinions, emotions, expectations, etc. As a result, there exist multiple realities within the very same corporation (Saunders et al., 2019, pp. 148-149).

4.2.2 Epistemology

The second philosophy, epistemology, defines what can be counted as knowledge that is valuable to a specific research issue. The main topic in discussion is whether or not the same procedures and methods can be used for every research study or if they have to differ due to the philosophical stance that the researcher takes (Bryman & Bell, 2011, p. 15). Under a positivist paradigm, research is being viewed as strictly objective and the values of the researchers and participants must not in any case affect the research object. This is being defined by the term dualism, where positivism believes that the researcher and the object being researched can and must be fully separated from each other (Park et al., 2020, p. 691). This means that positivist epistemology first assumes a specific hypothesis on an actual research phenomenon, then identifies observable variables interrelated and finally uses scientific, objective methods with which the phenomenon can be made measurable and quantifiable (Saunders et al., 2019, pp. 144-146). On the other hand, an interpretivist stance suggests that there can never only exist one version of a phenomenon and that there is no one-size-fits-all model to gain knowledge. Instead, to get access to these multiple realities of a specific phenomenon, there are various approaches and methods and each of them has their right to exist and to be taken into account (Burr, 2015 p. 223).

4.2.3 Axiology

Lastly, the axiological view describes how researchers handle values and ethical considerations in regards to their study (Saunders et al., 2019, p. 134). Within positivism researchers are strictly preventing themselves from interacting in any direct form with the object being researched, hence they are aware of its objective stance. Therefore, positivist researchers are not to engage with participants during their data collection process. To alter their value-free stance, they have to further ensure that they are not actively invested in any experiment that is being conducted, which could otherwise affect the results and therefore the whole study (Park et al., 2020, p. 692). The interpretivist axiological view, however, realizes that the researchers' own values, beliefs, etc. have an influence on conducting the research study. Empathy plays a vital role, as researchers need to make sure to understand the participants' reality, their views, emotions, opinions, etc. (Saunders et al., 2019, p. 149).

Regarding the above-mentioned paradigms and philosophies, we have chosen to take a qualitative stance to conduct our research study. The main reason behind this decision is that our research questions are formulated in a way that only through qualitative reasoning, it is possible to fully understand and answer them. Therefore, we see ourselves as interpretivist researchers. This means that ontologically, we align with Saunders et al. (2019, pp. 148-149), as we believe that there are multiple realities created by our participants, which contribute to the process of creating knowledge as well as increasing already existing, theoretical knowledge.

Epistemologically, we believe that the method most suitable for gathering information in order to answer our research questions are semi-structured interviews with participants in a random sample of our population.

4.3 Research approach

According to Reichertz (2014, pp. 125-126) there are three possible ways of describing researchers' approach to conducting their studies. These can be named as abduction, deduction as well as induction. Abduction begins with data collection and analysis. However, abductive reasoning only starts, when researchers compare real-life phenomena with already existing knowledge, such as theories or frameworks and make a surprising discovery. Thereby, the real-world situation is not behaving or resulting in what it should be, according to the literature. This gives birth to a brand-new conceptualization, which are made in accordance with researchers' own perception and therefore explain circumstances surrounding it in a better, more logically fitting manner. The process by which abduction is created should not be confused with the concept of random 'guessing' as researchers have to judge this unexpected event in an informed way by weighting different theoretical concepts and arriving at an informed consensus (Reichertz, 2014, pp. 126-127). In contrast, the process of deductive research already starts by finding a theoretical research gap, formulating preliminary hypothesis and test them through conducting empirical data. Within induction, the process begins by investigating already existing knowledge and spotting a research gap, which is aimed to be closed by empirically studying the phenomena in question (Saunders et al., 2019, pp. 153-155).

For the purpose of finding answers to our research questions, we decided to reason for the inductive research approach. This is mainly due to the lack of universal understanding of a unified sustainability reporting framework and the upcoming, new role of the controller as an ESG specialist, which have not been discussed in previous research. Therefore, the objective is to get as much primary data as possible to close the research gap and create further knowledge for companies regarding sustainability reporting and the role of the ESG controller. We are thereby aligning with the above defined concept of Saunders et al. (2019, pp. 154-155) and take an inductive approach by using empirical data to generate new knowledge and add to the already existing literature.

4.4 Qualitative data collection and analysis

4.4.1 Population, sampling and sampling method

The first issue regarding the design of the qualitative research study is to identify a corresponding population as well as a sample and sample size. By definition, a population is the targeted group from which information can be taken in order to close the identified research gap and broaden the horizon of already existing knowledge. It is possible that various steps are necessary to granulate the target groups until the main population is determined. This is usually the case within business units of companies or organizations (Ritchie et al., 2003, pp. 86-87).

After identifying the population, a sample, which Ritchie et al. (2003, p. 82) defines as a necessity to granulate the population even further to a manageable amount that represents the values, opinions, etc. of that population, and its sample size need to be chosen.

There are different ways of arriving at an appropriate sample depending on the objective of the study. The first category can be named as criterion based or purposive sampling. The sample is chosen due to its unique characteristics, which are distinctively, closely related to the main features of the population and therefore optimal for gathering essential primary data. Types of purposive sampling methods include homogenous samples, which have the same or a similar set of characteristics, heterogeneous sampling, where the samples are mainly disconnected from each other or stratified purposive sampling, in which atypical versions can be compared through various approaches to the same topic (Ritchie et al., 2003, pp. 78-79).

Furthermore, theoretical sampling as its own sampling method goes beyond the traditional purposive sampling by identifying a research gap, empirically conduct data, analyse it and then iteratively continue the process until theoretical saturation is being reached (Ritchie et al., 2003, pp. 80-81). Lastly, opportunistic sampling suggests that researchers approach their samples according to the difficulty to gain access. Therefore, the more convenient the method, the more efficient and better for researchers. Some examples of convenience sampling methods include snowball sampling, networking or randomly asking people to participate in the study in public spaces (Ritchie et al., 2003, pp. 81-82).

Regarding the sample size of the study, qualitative studies are typically held in smaller amounts. This is firstly, because saturation is being reached earlier due to the sheer amount of data that is being collected upon the same topic. Secondly, there is no need for a higher number of the sample size due to statistical irrelevance and thirdly qualitative information is naturally characterised as extremely detailed. Some general rules for sample sizes include homogeneity and heterogeneity. The rule of thumb is that the more homogenous a sample is, the fewer the sample size and vice versa (Ritchie et al., 2003, pp. 83-84).

To fulfil the purpose of this study and therefore to collect qualitative, primary data, it is vitally important to gain access to companies within the chosen population of the study and their responsible regarding sustainability reporting. Gaining access to companies and especially internal knowledge held by employees is considered extremely difficult and there are multiple stages that access can be granted. The first form is described as physical access and one of the most difficult positions to negotiate access from. This is due to factors such as limitations in companies' time or a potential lack of practical benefits of the planned research study for them. Furthermore, companies might be more reluctant to grant access to external researchers due to the fact that the motivation and morale of them is unknown to the firms. Thereby, creating distrust between the two parties. As a result, researchers might need to especially search for those companies, which voluntarily take this type of risk into account. If companies are not willing to accept these potential risks, researchers might have to adjust their approach to make them more appealing and easier to companies as a consequence. Other ways to gain access into companies are either through multiple attempts or by cognitive actions (Saunders et al., 2019, pp. 165-166).

Another, more self-sophisticated way of being granted access to information provided by companies is through stating a formal inquiry on the topic of interest, its objectives and further details on the method of conducting the study. This is a more external approach to gaining access to a company, as one does not need to physically attend to a specific location, rather questions are being asked through various possible media channels. However, researchers are subject to companies' will to accepting the inquiry. They are more likely to grant access, if researchers manage to present their research topic, purpose and objectives in a concise, transparent and interesting way. Thereby, managers will realize potential benefits for their own company easier. This is the case when researchers highlight time frames and limitations, the scope and extent to the study, its purpose and the use of data as well as the ways in which companies will benefit from (Saunders et al., 2019, pp. 165-166).

After careful consideration of the above-mentioned, theoretical issues regarding population, sample, sample size and access, we chose to approach these topics the following way. Our population was determined as Swedish companies, regardless of their size. The process of gaining access to these companies included a web browser search on the online platform 'allabolag.se'. Through this website, companies in various branches, industries, etc. could be identified. The total number of companies and therefore the population of the study can be named as 1 518 659 Swedish firms. The subsequent sampling method can be described as above-mentioned purposive sampling due to the fact that we only took Swedish companies into account that disclose sustainability reports on the premises of sustainability frameworks and indices. Companies were randomly chosen from 'allabolag.se', and thereafter checked upon their websites on their current status of sustainability and ESG reporting. The researched companies were only taken into account for the sample size, if they had prepared a sustainability report according to the standards of GRI, SASB, CDP or TCFD. However, if they did not use any standards or certifications such as ISO or FSC to explain their sustainability efforts, they were discarded from the sample. The sample size of our study is 55 companies and the response rate can be calculated as 10,91 % (six companies). This relatively low response rate can be explained through various circumstances. Firstly, generalization was not the objective as the main concern was to gain as much primary data as possible. Moreover, we argue that time constraints regarding this study as well as circumstances regarding companies' willingness to participate or even answer our formal inquiry were two main factors for our lower response rate. Nevertheless, and being in line with Vasileiou et al.'s (2018, p. 15) study upon low response rate studies' reasoning, we argue that theoretical saturation can be achieved through conducting six in-depth expert interviews upon a relatively new topic, where little research has been conducted up until now.

Furthermore, our approach to gaining access to companies' information regarding sustainability reporting was rather formal, as described by Saunders et al. (2019, pp. 165-166), through sending out standard E-Mails. Within these E-Mails, information was provided about the objectives, time and other limitations, the research process as well as the method by which the qualitative study was conducted. A sample of this standard text can be taken from Appendix 1. The aim was to gain access to companies' human resources that are intertwined with sustainability disclosure and therefore presenting the inquiry in a concise and compact way helped to get companies' and especially responsible attention.

4.4.2 Interviews

There are various types of research methods that can be used for conducting qualitative studies. One of them is the method to interview participants in order to receive primary data. This data set distinguishes itself from secondary data, which is already existing knowledge, by adding to what the literature currently offers, contradicting or conflicting its views (Saunders et al., 2012, p. 304). Interviews in a research context can be explained as having a constructive conversation upon specific topics in question with two or more parties. The function of the researcher is to actively listen to the participants and proactively contribute and moderate the discussion. The objective is to gain information in order to answer the research question (Saunders et al., 2012, p. 372).

By definition there exist two broad types of interviews which can be referred to as unstructured and structured interviews. Unstructured interviews distinguish themselves from structured interviews through its nature of understanding complex topics. This is being done by gathering a large quantity of data rather than limiting the data through prerequisite topics and sub-topics that lead the way through the interview. This does not mean, however, that unstructured interviews are not structured per se, rather they use some standard settings such as a given location or specific participants to support the process (Fontana & Frey, 2000, pp. 652-653). Nevertheless, there exists a third group of interview types, which are semi-structured interviews. Within those interviews specific main topics are chosen to be discussed upon and vital questions are determined beforehand. However, when conducting the interview, the researcher can freely direct the way where the interview is headed and therefore highlight or dial over specific prerequisite questions (Saunders et al., 2012, p. 374).

The research method for this qualitative study is to use semi-structured interviews. This gives us the opportunity to discover specific topics that participants valued higher, more in detail and using the optimal amount of time, as time was seen as one of the major constraints in conducting the interviews. The research questions were created by specifying three main topics, which can be named as sustainability, sustainability reporting and ESG controlling. From that point on we conducted the questions in coordination with the literature review, especially theoretically, critically mentioned points that were highlighted. The interview questions were prepared as open-ended questions, which Saunders et al. (2012, p. 391) described as allowing interviewed participants to express themselves in detail upon the question and therefore supporting our semi-structured interview approach. This interview guide can be viewed in Appendix 2. An interview guide of our pre-structured 21 questions was sent to the participants in beforehand to show transparency and give them the chance to prepare and structure some of their answers. The interviews were held as online interviews and conducted through the online communication softwares 'Zoom' and 'Microsoft Teams'. This approach is being supported by Fontana & Frey (2000, p. 666), who point out that conducting interviews electronically offers advantages for both interviewed and interviewee. Therefore, online interviews are connected with less time constraints and costs for the researchers and a safer environment for the participants.

Furthermore, the process of collecting data included video recording through Zoom's own function to record interviews and back-up audio recordings by using our smartphones. As Saunders et al. (2012, p. 394) describe, this is a common method in order to safeguard the data collected and for the researcher to protect themselves against eventualities.

The participants were informed about the process of data collection and asked for permission before the interview was started.

Details regarding the interviews can be taken from Table 1. The total duration for the interviews amounted to 3 hours and 35 minutes. The participants were employees or managers within their companies that all had experience, dedicated tasks or specific responsibilities within sustainability reporting. However, not all of them were actually working as a dedicated ESG/sustainability controller. The companies taking part within the interviews can be classified as medium/large sized Swedish firms from different industries.

Table 1: Information regarding semi-structured, qualitative interviews

Participant	Participants' profession	Company industry	Interview duration
Participant A	ESG Controller	Fashion industry	41 minutes
Participant B	Sustainability Controller	Metals & Metal Ores, Wholesale	32 minutes
Participant C	Sustainability Controller	Ore extraction	35 minutes
Participant D	Legal manager/Sustainability manager	Energy industry	49 minutes
Participant E	Head of finance	Energy industry	29 minutes
Participant F	Sustainability director	Energy industry	29 minutes

4.4.3 Data analysis process

The first act to transform the voice recordings from the interview involved transcribing. Transcription is the process by which the spoken voice files are turned into data files that researchers can later code and ultimately draw conclusions from. With regard to the process, usually, transcription involves the researcher using time and effort to word for word capture the conversation of the participants (Kowal & O'Connell, 2003, pp. 66-67). However, as Kowal & O'Connell (2003, p. 76) stress, the objective of using technological support through software programmes that transcribe the conversation instead of the researcher, is to use them for a specific research topic and not for archiving. As a result, we decided to use Microsoft Word's online transcribe function, which is a transcribing software that supported us in the process of transforming the voice recorded interviews into Microsoft Word files.

The method that we chose for analysing the qualitative data gathered during the course of our interviews can be defined as thematic analysis.

It generally supports the researchers in two distinct stages. During the first phase the primary data gained from the interviews is checked to ensure high quality and relevance. Thereafter, the transcripts are analyzed through a coding mechanism which enables higher quality of the research itself. Through thematic analysis it is possible to identify continuous patterns in the data and therefore to gain access and an understanding of participants views, opinions, feelings, etc. (Clarke & Braun, 2016, pp. 297-298).

After transcribing the interviews, the data was reduced to discard information that is non-relevant to the topics of our study. Thereafter, we analyzed all the different aspects of the answers that were received and came to the conclusion that there are four, distinct, main categories that have been talked about the most by the participants. It has been decided that these will be the main categories leading through the analysis part of the next section. Furthermore, between three to four distinct sub-categories were identified that the main topics are divided into. These sub-categories represent a cluster of important information that aims to add new knowledge on the topic of sustainability reporting and the role of the ESG/Sustainability controller.

4.5 Literature research process

Through the literature research, researchers try to capture the already existing knowledge regarding a specific topic. Therefore, the aim is to increase the researcher's own knowledge on the research topic by searching upon and reading as various and different scientific articles, newspapers and books as possible. By the end the researcher should be able to argue and discuss from a better, informed and more knowledgeable standpoint. Furthermore, researchers will be able to understand and more importantly have a critical opinion upon previous studies and their stance to their own research study (Saunders et al., 2012, pp. 97-98)

Thereafter, the researcher needs to follow-up with writing a literature review that critically covers the research topic. The focus should be given to state the current views of existing knowledge as well as highlighting gaps which will be taken upon within the researcher's own study (Saunders et al., 2012, pp. 73-75).

Primarily, secondary data was used in order to conduct the theoretical frameworks as well as the literature review by identifying already existing knowledge on the topics of concepts, frameworks, sustainability reporting and controlling. The information gathered gave us a greater overview upon the two main areas of the study and were the key basis of our arguments regarding the comparison between theoretical and empirical data. Most of the literature research has been conducted by using online search engines and databases such as Google Scholar, EBSCO or EMERALD to find appropriate articles, books and other sources. To deliver strong, professional statements and to highlight the research objectives almost only peer-reviewed articles, books or other online articles were taken into consideration. However, due to the lack of scientific articles upon the developing profession of the ESG/Sustainability controller, some website articles and blog posts needed to be integrated in order for us to increase our knowledge upon this topic and make informed arguments.

4.6 Research ethics

One of the main concerns that will affect the process of conducting a research study, from organising and collecting data to analysing and integrating it into the thesis, is ethics. Research ethics generally determine what is standardised as acceptable behaviour when conducting a research study or thesis and can therefore contain important guidelines regarding various parts of the research process (Saunders et al., 2012, p. 226). In the following paragraphs, we try to outline some of the most important ethical considerations that are essential to our specific research process.

4.6.1 Voluntary participation

When participating within a research study, the participants always, at any point of the process, need to have the option to withdraw. Therefore, the ethical consideration of voluntary participation states that clear consent from the participant needs to be given, in order to proceed with the research process. However, even if voluntary consent is given, it should always be understood as giving consent to the information provided. Therefore, informed consent means that transparency between the researcher and the participant needs to be held in place about all the information regarding the procedure. Furthermore, extent to participation cannot be willingly changed by the researcher without clear and informed consent given by the participant. Some of the most important rights for the participant regarding voluntary participation include not to speak or give information, to refuse to make statements about the data in question or to move away from the study. To participate and withdraw from research studies is further connected to the principle of circumventing harm to the participants. Harm to participants can occur in multiple ways, such as mentally, physically or emotionally. Often harm is caused by a research method that affects the participant in a tedious way, which might lead to symptoms of stress, anxiety or a feeling of being unwell. Therefore, open communication with the participant and a good preparation of the research process in advance are essential to avoid any form of harm to participants (Saunders et al., 2012, p. 231).

During the research process of our qualitative study, the topics of voluntary participation as well as harm were discussed before conducting the interviews with the participants of our study. Therefore, we made sure to communicate through the invitation E-Mail, which was sent to gain access to the participants knowledge, that participation is completely voluntary. Furthermore, in case of any confusion among these E-Mails, we made sure to gain informed consent by our participants actively reading through and signing the GDPR document provided by our university to make sure that all interviewees understood and recognized their rights regarding the study. Moreover, we asked again for permission to conduct the qualitative study as the first question within our interviews, which can be taken from Appendix 2. These steps were necessary in order to fulfil the criteria, mentioned by Saunders et al. (2012, p. 231) to avoid any kind of harm and reach informed and transparent consent with our participants.

4.6.2 Anonymity and confidentiality

One of the key principles to ensure safety regarding avoidance of harm against participants are anonymity and confidentiality. To reach this level of safety, researchers commonly describe participants' answers to research questions within their research findings with pseudonyms that are not recognizable and trackable for readers.

However, while those topics are quite similar, there are key essentials. Therefore, the objective of anonymity is to hide or change personal information about the participants that could lead others to their identity. On the other hand, confidentiality's main focus is to protect the information provided by research participants. Even though, there is an ongoing discussion about the extent to which the anonymity of participants, such as organizations, can be protected. This is because an integral part of researchers' studies is to relate or connect certain features among companies, therefore anonymity hinders researchers' ability to freely analyse and compare their research findings. In other cases, organizations might want to be named to share their opinions, experiences, etc. (Bell & Bryman, 2007, p. 70).

To maintain and guarantee anonymity and confidentiality of participants and their respective companies within our qualitative research study, we made sure to have certain measures in place. Therefore, to preserve anonymity, we gave our participants specific, but impersonalised and non-traceable names by using the synonyms participant A-F. Furthermore, any specific personal data taken from the interviews was either generalised to protect the participant answering, for example their job description and experience, or has been stored according to the GDPR regulation of Umeå University and thereafter been deleted.

4.6.3 Data privacy and protection

Data privacy is also one of the key points to preserve participant's dignity throughout the research process. Specific guidelines on how to use the General Data Protection Regulations (GDPRs) are stated within EU laws. Generally, these laws describe the principle of privacy is being handled subjectively among different countries and cultures. As a result, researchers need to take care and individually decide how and to which extent to apply these guidelines. Data protection further solves questions regarding digital privacy and is therefore an essential part of researcher's ethical data collection and analysis consideration. Thereby, GDPRs are vitally important to safeguard the collection, storage and publication of data. Furthermore, standards and their unified application vary due to the differences in regional interpretations of these guidelines by authorities (Umeå School of Business, Economics and Statistics, 2022, pp. 8-9).

All regulations mentioned in the GDPR provided by Umeå University have been held in place and been respected in the course of conducting this qualitative research study. The guidelines, which inform participants about their rights regarding the study and the process of how their data is being handled, was sent to and signed by the participants of this thesis work and can be taken from Appendix 3.

5 Research findings

In the course of analyzing our data gathered by semi-structured interviews that we conducted with the companies and their respective participants, we found four main categories to investigate upon. The analyzed categories as well as sub-topics are visible from Table 2. These can be named as ‘Company view on sustainability and its effects’, ‘Sustainability Reporting’, ‘ESG scores’ and ‘ESG/Sustainability Controller as a new profession’. The former topic can be further distinguished into three sub-topics that are handled in greater detail later in this chapter. These are ‘Company perspective on TBL’, ‘Effect of sustainability on finance’ and ‘Motive for sustainability reporting’. The main goal with putting these groups together was to investigate how companies prioritize their view on the TBL, if sustainability issues have an influence on their financial data and whether these results had an influence on their motivation for conducting SR. The second main group can be divided into ‘SR frameworks’, ‘SR data and tools’, ‘SR influencing decision-making’ and ‘CSRD as the future reporting guideline’. The objective within these subsections was to find out about the companies’ view on SR frameworks, the data gathering process and the tools necessary as well as future, new or unified regulations that will influence SR. The third main category can be split into three sub-groups, which are ‘ESG score usage’, ‘ESG scores’ content’ and ‘ESG score reporting’. The goal was to investigate the way that companies handle ESG scores, how they use them in their reports and their opinion on points of criticism. The latter group consists of three sub-topics, which aim to investigate the background of the profession of the ESG/Sustainability controller, the specific tasks and responsibilities and differences between the rather new profession and the traditional view of controlling.

Table 2: Structure of research findings

Main topics	Sub-topics			
<i>Company view on sustainability and its effects</i>	<i>Company perspective on TBL</i>	<i>Effect of sustainability on finance</i>	<i>Motive for sustainability reporting</i>	
<i>Sustainability Reporting</i>	<i>SR frameworks</i>	<i>SR data and tools</i>	<i>SR influencing decision-making</i>	<i>CSRD as the future reporting guideline</i>
<i>ESG scores</i>	<i>ESG score usage</i>	<i>ESG scores’ content</i>	<i>ESG score reporting</i>	
<i>ESG/Sustainability Controller as a new profession</i>	<i>ESG/Sustainability Controller Background</i>	<i>ESG/Sustainability Controller tasks and responsibilities</i>	<i>ESG/Sustainability Controller versus Financial Controller</i>	

5.1 Company view on sustainability and its effects

5.1.1 Company perspective on TBL

One of the questions that was asked during the course of the semi-structured interviews, surrounded the topic of the triple bottom line. More specifically, which of the three layers of planet, people or profit are most important to the participants. This was done to increase our knowledge in terms of how companies perceive sustainability issues in regard to economical topics. The answers that we got were rather homogenous with some slight variations. Most of the participants answered that there is a concept combining the three layers for a reason, with participant A stating that their company is *“[...] working with sustainability from a holistic perspective, it is not that one thing has a priority or is a priority amongst them [...]”* or participant E mentioning that TBL *“[...] of course it is a mixture [...] the planet sort of mitigating climate change [...] and then underneath, on top of that, we have sort of our ambition to be a really sustainable company in the way we conduct our operations and there we have people, planet and profits sort of really closely mixed together [...]”*.

For other companies, their sustainability efforts are shifted more towards the planet or environmental layer of the triple bottom line. For example, participant B stating that the most important level of the TBL *“[...] for my company it would be environment. I think most of our subsidiaries work directly with recycling. So, it is an integral part of their business [...]”* and participant C, elaborating even further *“[...] that without planet, there is no people, there is no profit [...]”*. All of the participants, however, agreed to that there is some interconnection between the three layers of the triple bottom line and that each topic affects the other, which creates specific interlinkages and dependencies between them.

5.1.2 Effect of sustainability on finance

Following the previous discussion upon the triple bottom line, we wanted to know if companies already see evidence that sustainability topics are positively affecting their financial positions, such as increased revenues or decreased operational costs, within their companies. The results from the interview data suggests that most of the participants share the same, strong opinion, that there is a connection between sustainability issues and a company's financial positions, however, they do not have a good understanding of how or where sustainability would affect their positions in general yet. When being asked about their opinion participant A states that *“[...] that is what I very much hope, that we are going there. I think we already see some indication, but still like a lower effect. [...]”* and participant B follows even more enthusiastically with *“[...] I want to say directly, yes, and my answer will be yes. [...]”*. While participant D answered a little bit more precautionary by mentioning that *“[...] we do not see it right away, but I think it will be more to come in the in the future actually in the nearby future. I cannot say that we see those effects right now. [...]”* and participant F not seeing sustainability as a necessity to keep their business stable.

The reasons for companies that answered more positively, vary quite drastically, which could be explained by the differences in sustainability issues due to their industries. Participant A mentions the interplay between internal and external pressures as part of the reason by stating that *“[...] the management very much listens to what both board of directors, but also the shareholders say so as soon as they put pressure on us and demand to see certain things in reporting. Then I think that indirectly or directly has effects on our financials. [...]”* While participant B states that lacking in terms of sustainability performance could affect the company negatively in the future *“[...] pretty soon it is not just going to be a legislative and you are going to be hit with fines [...] if you do not meet the requirements [...]”*. Those companies taking a rather negative stance on the direct, positive influence between sustainability and financial positions, such as participant F argue that their main reason is that *“[...] sustainability in itself is not necessarily a way to make a lot of money. But as our economic systems develop, they will most necessarily become more and more profitable in comparison to non-sustainable activities [...]”*.

Being asked among the magnitude of the sustainability effects on financial data, only participant A answers to this question by stating *“[...] I do think that this magnitude of impact is increasing over time due to different changes that we see in both the industry but also regulatory changes and just in general more pressure on companies [...]”*.

5.1.3 Motive for sustainability reporting

To bring the two former sub-chapter topics together, we asked the participants about their companies' primary motives upon reporting on sustainability issues. This is to see whether companies really believe in sustainability as an integral part of their core business or if sustainability reporting is seen as a mere tool to please their stakeholders. The answers and motives received from the participants were surprisingly different and varied by a great margin across all interviews. Nevertheless, some participants, such as participants A and F aligned partly with their statements on their primary motive for sustainability reporting, which is to create transparency for external stakeholders or private investors. In that regard, participant A mentioned that *“[...] it is as of now mostly about accelerating transparency which is the main goal behind sustainability reporting for us, making it possible for all stakeholders to access the information in an easy way. [...]”* and participant F elaborated *“[...] the motives for the company are initially to bring transparency into a company owned by the citizens [...]”*. When being asked upon more in detail about how better transparency can be achieved participant A answered *“[...] by having more ESG data summary at the end of the report, where you really find all the KPIs that makes it easier for the ratings or to investors to not look for long time within the text where it is always a bit more hidden [...] also making it accessible for download and so on [...]”*, while participant F chose to explain it rather as a necessity to fulfil.

Another major motive that was mentioned by two participants was to use sustainability reports as a way to show externally the companies' efforts regarding sustainability with the aim to retain or attract new employees. This was mentioned by participant E by stating *“[...] it is increasingly being more and more relevant for all our employees [...] we have a great need to recruit more people and we see that people who want to work here, it is important for them. [...]”* as well as participant F by mentioning *“[...] the people that do read it are either newly employed or hoping to be employed by [the company]. People want to feel pride, interest in the company that they work for. So, it has a lot of value in that aspect. [...]”*.

Other aspects to why companies choose to report among sustainability issues come from within, as companies choose to disclose sustainability matters due to seeing them as being an integer part of their core business. Three participants said that this is among the main motive for them to measure extensively among sustainability topics and report upon them. Participant B connects their sustainability efforts to their strategy by mentioning that *“[...] it is what drives our sustainability strategy, because it gives us the incentive to actually measure KPIs from year to year, which without which we would not see progress or be able to internally create strategies. [...]”*. Additionally, participants C and D see sustainability reporting closely linked to their core business, which means that disclosing sustainable matters is not only a moral, but also internal driver. Participant C states *“[...] that is really in the core of [the company] that we want to do that change. But then how we report it with GRI or SASB, that is pretty much up to the investors [...] But I mean we want to keep track, we want to measure for ourselves, because we have a strong vision and quite strong goals in our company [...]”* and participant D elaborates further *“[...] the company works towards the carbon neutral neutralization, that is [...] what makes the profit for us and that goes then hand in hand with sustainability [...]”*.

Still, it seems that pleasing stakeholders some participants mentioned that their motives were somewhat linked to shareholders or potential investors. Thereby, participant B mentioned that *“[...] for stakeholders it is our most important instrument of communicating our sustainability and financial results every year. [...]”*, while participant E states that *“[...] from the beginning when we started, it was mainly as a sort of a way to meet the expectations from external stakeholders [...]”*.

5.2 Sustainability Reporting

5.2.1 Sustainability reporting frameworks

In this section of the semi-structured interviews, the participants were asked upon which frameworks they use to prepare their sustainability reports. Nearly all of the participants answered that they use the GRI framework as their ground base as, for example participant A describes *“[...] with the sustainability report you cover GRI, the global reporting initiative because that is the index you have that is a really detailed guideline where you follow how to calculate and how to report on KPIs. [...]”*. Some have also mentioned that the Swedish legislation is playing an important rule and to some extent dictates what is necessary to be reported upon in their sustainability reports. Participant B, thereby, elaborates *“[...] we also have of course the Swedish ,årsredovisningslagen‘ [...]”*. However, it seems that most of the participants go beyond simply reporting on GRI. They extend their sustainability report by complimenting their generic GRI and legislative sustainability information through including other frameworks or guidelines. The most frequent ones were named as the UN Global Compact, CDP and TCFD. Thereby, participant A stated *“[...] if you count in or define other kind of organizations, also as guidelines, as for example CDP, UN Global Compact, then these are all also going into and influencing our reporting [...]”*, while participant C said *“[...] we are doing the 10 principles of the UN Global Compact and and then we are doing TCFD [...]”* and participant E followed with *“[...] we are also connected to UN Global Compact and since last year we report on TCFD [...]”*.

One of the participants, participant C, mentioned that they even had to report according to an industry specific guideline setter by stating “[...] we are doing [...] ICM because we became a member of ICM. So, that is the international mining organization and we have to report according to that standard to be able to be a participant. [...]”.

When further being asked upon specific challenges that arise from using various different sustainability frameworks and regulations, the participants stated different obstacles that they had to tackle. For participant B it is twofold as the methodology of the TBL is according to them “[...] quite limiting in some ways, because the concepts environment, social and governance, they [...] make it sound like it is three separate things and it is all one connected thing and that I think that it is not being addressed on [...]” and further on future challenges regarding sustainability reporting they mention that “[...] the just transition problem, how do we create a just environmental transition and not forget, children's rights and vulnerable groups. That is something that we are brushing the very top off [...]”. Other participants, such as participant F, saw future challenges more in the direction of entangling already existing regulations with new guidelines and aligning them by stating “[...] I think it is going to be much more difficult [...] when it comes to the taxonomy in the EU where we are trying to dictate what is sustainable through all European countries where the conditions are very different and that makes it a very daunting task to define what is sustainable on a global perspective without looking into local conditions. [...]”.

On the follow-up question, if in their opinion a unified, standardized framework is necessary to be implemented in the future, we got practically the same answers. Participant B states “[...] well, of course it would be easier to have a standardised one [...]”, participant C follows that opinion by mentioning “[...] definitely to have one which is not too detailed and too general either, but it has to be suitable to a lot of different companies. But yes, I think it would be much better if we could have a common framework [...]”. Participant F elaborates even more in detail upon the importance of such a unified framework, idolizing economic reports in that regard by saying “[...] I am guessing that we have to aim for some kind of universal reporting seen just as economics already [...] I mean, in principle, you pick up a report in Bangladesh or in Sweden or in Australia, and then they are all comparable. And we need that kind of reporting standards in sustainability as well [...]”.

5.2.2 Sustainability reporting data and tools

We furthermore asked our participants upon the process of collecting data that is necessary for producing the sustainability report. Each participant uses a different method to collect their respective sustainable information and therefore comparability regarding this topic is especially difficult. Nevertheless, there are some similarities that were mentioned regarding the data gathering process. Thereby, participant D states “[...] we have many different systems, so it had been easier if we had only one system [...]” and participant C, who also faces the issue of sorting data according to various systems in place, elaborates even further by mentioning “[...] we have so many different sustainability topics that are material for us and that way we of course [...] cannot do all of this on our own. So, every department has their own chapter, but then we are responsible for collecting everything and following up on everything and so basically the KPIs they are measured by the different individuals that are responsible for those areas. [...]”.

Moreover, it seems that the data collection happens at the lower level of the company, meaning bottom up. Some participants mention a dedicated coordinator that is not only responsible for collecting the data from the lower levels, but also to communicate specific issues. This is reflected by the statement of participant E *“[...] our sustainability coordinator reaches out to those people and collecting the data and then usually our CFO works through the definitions, seeing that everything seems to be correct according to the results from last year and then [...] we describe the change from last year to this year, what is making the analysis [...]”* or participant B *“[...] each site in Sweden [...] they all have different emissions and they all report their individual emissions into the data reporting system that we use to gather data. [...] then in each subsidiary we have a sustainability coordinator at each subsidiary and they internally also cooperate with their local departments. [...]”*. Other participants, such as participant A, mentions that generic sustainability data is gathered in a specific third-party system, however, other activity-based, local information is gathered mostly by the sustainability reporting responsible asking other employee experts. Participant A states *“[...] it is just about really asking a lot of questions [...] for example for company cars then I would maybe have to find out if it is one contact in accounting that handles all the company cars and has access to the fuel data and then this is the input data that is used to calculate scope one emissions [...]”*.

The follow up question surrounded the topic of sustainability reporting tools, meaning through which software tools the data is gathered, stored and handled in. Some of the participants answered the same or similarly, by stating that Excel is their main sustainability software tool, where most calculations for the report are being made. Participant D mentions *“[...] we have some systems where you can report incidents, it could be related to occupational health and safety or related to environment and then another system for energy [...] then we have systems for water consumptions and so on and we will use a lot of Excel files [...]”*, participant E mentions *“[...] we have an Excel document [...] they [local sustainability responsible] get the Excel files and report in the Excel files and then send it at a specific deadline to our sustainability coordinator. [...]”* or participant F, who elaborates *“[...] Excel, Excel and Excel [...] But when it comes to our use of energy and fuels that is done in more advanced databases than Excel [...]”*. Other participants state that they use some form of state-of-the-art sustainability reporting tool. One of them is participant A who mentioned *“[...] it is actually a third-party company, ‘Position Green’ that offers an ESG software solution where you can report, calculate and store all that data. It has auto track, so we for example, could link auditors to the platform and they can just use this as a one single data source to see all of our ESG data and [...] can follow each change that has been made in the platform. [...]”*.

When being asked about the way participants increased their knowledge upon sustainability reporting, all of them answered in a similar way. Therefore, the most common ways of gaining knowledge by sustainability reporting responsible are as described by participant E *“[...] newsletters, the Swedish sustainability media, [...] sustainability advisors and communication advisors by whom we get invitations to seminars [...] that is our main way of keeping track on the development. Then of course when we have the new regulation coming up, we read the regulations and the frameworks to sort of understand it. [...]”*. With regards to this statement, participant D elaborates further *“[...] we also have a special system that collects all the Swedish legislation and this system or supplier also gives us webinars with the information about new legislation. [...]”*.

5.2.3 Sustainability reporting influencing decision-making

One of the questions within the semi-structured interviews was upon the increasing importance of non-financial or sustainable measures compared to financial measures within the strategic decision-making process of companies. Therefore, the companies were asked about the current status-quo. Many participants were on the one hand stating that there is an increasing importance, however on the other hand sceptic upon the current impacts of non-financial measures within corporate strategies and were therefore referring to future effects. Among others, participant A mentioned the following “[...] *the importance is definitely increasing [...] it is affecting decision making because the sustainability manager reports to the CFO and has regular meetings with the whole management and reports to the board of directors and so on. So, there is this ongoing communication of trying to align these goals and the strategy in the future. [...]*”. Participant B has the same opinion, but reasons for the importance of the new CSRD regulative, introducing double materiality and therefore positively influencing the role of sustainability matters on corporate decision-making. The participant, therefore, states “[...] *I think also that it is going to be a gradually natural process [...] but personally I really like the idea of the double materiality analysis [...] that is one of the really positive things about the new legislation, because then I think it will be much easier to demonstrate to everyone in charge the financial implications of the work that we do in the sustainability department. [...]*”. Only one of the participants, such as participant C, said that they believe that within their company, non-financial measures already are on the same level of influence as financial ones by mentioning “[...] *I would say that it is equal actually. [...]*”. While participants D and E are more sceptic in regards to the current effects of sustainability on the decision-making process. Thereby, participant D stating “[...] *I would say today they might not have an as much important role as financial data has in decision-making [...]*” and participant E explaining “[...] *I think we are moving in that direction, but we are far from there yet. [...]*”. However, especially participant D is positive that the future impact of those non-financial KPIs will affect corporate decisions in a greater way, by reasoning with “[...] *I can see that they will actually align more in the future [...] if it is related to regular legislation, then it is important. So, we do not break any [...] regulation. Then we need to follow it. [...]*”.

5.2.4 CSRD as the future reporting guideline

To uncover more details about the upcoming new EU legislation CSRD and how companies are affected by it, the companies were asked about when it would become an essential part of their sustainability reporting efforts. Most of the participants are affected by it in the nearby future. Participant A, mentioning by proxy “[...] *we will be affected more for next financial year 2024 and then reporting in 2025 [...]*”. The same is true for participants C and E. While other participants have one more fiscal year to prepare for reporting on the new regulation, such as participant D stating “[...] *for [the company] I mean we have two years now it is in 2025 that we get affected by this with the start of reporting in 2026. [...]*”.

Furthermore, we asked the companies upon how they prepare themselves. All of the participants have already started to investigate and prepare for CSRD at the time of conducting the interviews.

Participants B and E use sort of the same method, as participant B said the following about their preparation phase “[...] we have started our research on it to the degree that we have a gap analysis against the ESRS part of the CSRD. So, that we know what data especially we have to complement with [...]”. Other ones are using more internal methods to increase the awareness of employees and responsible regarding the new legislation, such as participants A and D. Especially, participant D mentioned the following process as being an essential part of preparation “[...] we have discussed if this is something that we need to invent our own method and they [global organization] say that they will handle this and find a good process for it and the system for it. [...] And they will also take part of the training [...]”. Some are especially concerned with their current systems and already stress testing or preparing them, such as participant C, who mentions “[...] we have to be prepared already this year to store the data and handle the data in a good programme [...]”. Additionally, participants D and E turn to seek external help in finding out about the true scope of the new legislation. Therefore, participant D saying “[...] And I am part of some external networks with other sustainability manager subspecialists. They were also discussing if it is good to exchange information like how are you preparing for this [...]”.

When being asked about possible advantages and challenges in terms of CSRD, some participants were looking forward to it and gave positive feedback. For example, participant C mentioning “[...] In general, the whole idea I really like the idea of it [...] we can really make it comparable. [...]”. However, all of the participants mention some form of challenge that they are going to have to deal with, regarding preparations for CSRD implementations. Thereby, participant D mentions “[...] one big question is if we will need any additional resources. And the systems, of course, which systems do we need? [...]”, while participant C sees challenges arising as “[...] it [GRI] approximately covers about 30% of that new information. I think it is maybe a bit understated, but it is still a lot of new information that we are supposed to put into the management [...]”. Participant B goes even beyond that and mentions their main challenge as “[...] one of the big problems is that since the legislation has worked out on a theoretical level, many of the practical implications for the for the companies themselves have not perhaps been visualised very clearly. And especially I am thinking about the complexity of most actual value chains. [...]”.

5.3 ESG scores

5.3.1 ESG Score Usage

In this section, participants were asked whether they use external or third-party organizations to calculate the ESG scores. Four participants confirmed that they use ESG scores of third parties. Participant B mentioned that “on a group level, we do not use those rating systems [...] most of our subsidiaries, [...] they do that.” Participant A responded that “Yes, it is always different which ones. MSCI, CDP and then S&P Global CSA, the sustainability assessment also for the first-time couple of months ago that we have been there and try to give more data input. [...] kind of split with the rating agencies doing their work in terms of using publicly available data and then some of these agencies, you can complement the data by filling out some sort of questionnaire.” Participant C confirmed that “we do plenty of them. [...] S&P, Dow Jones [...] Bloomberg keeps a lot of data on us and all of those big different.” Participant F responded that “[...] the only third-party that we use is to help us calculate our carbon emissions [...]”.

Further, when participants were asked what purpose those scores serve, participant B answered that *“mostly because it is a customer request, [...] the purpose is service, [...] as a stamp of proof of performance for our customers. It does not serve really an internal purpose.”* We are not happy with just calculating our immediate emissions [...]. Participant F responded, *“We want to also see how we are affecting the energy system in large to give us a more balanced picture of what we are actually doing.”*

5.3.2 ESG Scores’ Content

Following ESG score usage, we asked about ESG score’s content and what it looked like. Participant A answered that *“ [...] recently, actually more engaging and finding out and contacting these rating firms and that was the case with the MSCI. [...] get access to [...] a web platform where you see how they come up with their risk profile. So, they typically MSCI and Sustainalytics [...] calculate a risk profile and a risk score that is usually from like low to high and then you can try to understand how they come up with this and also give feedback. And we for example saw that some data they used was incorrect or they may misunderstood our previous historic reporting. So, then we had the chance there to revise that. [...] also count in CDP almost as ESG [...]. Climate change questionnaire that is used to calculate how well a company manages its climate impact [...] last year we did for the first time the long and extended version.”* Participant B confirmed that they *“cannot answer how they use that information.”*

5.3.3 ESG Score Reporting

We have observed that many companies report their ESG scores in their sustainability reports. They included a paragraph that explained what kind of scores they got. Some companies explain it in more detail. Many companies are reporting various scores. Therefore, we wanted to know the purpose or the reasons for reporting scores. Participant A stated that *“ I cannot really see any reason. [...] sometimes it is about when we worked on the sustainability report. Now that there are different opinions on that, the content is too much and I can mention this is something that is maybe just not considered as important as other things to go really into depth there and explain. [...]“* and continues by referring to *“ [...] for the CDP for example [...]. A link where you read more about the scoring and how it works, so kind of just refer to the organizations, but other than that because if you already disclosed it, it is kind of you put it out there, [...] not really anything about hiding. [...] you make the differences clearer because some scoring maybe does not entail so much and does not really mean so much. So, then it could be easier for a company to not really explain much about it, because then it makes it sound more shallow [...] I do not really think there is a specific reason, maybe more having space or not prioritising it.”* Participant B responded, *“One of our subsidiaries we wrote about because they got the platinum score, so that is nice to write.”*

Upon responding to the above question, we further asked how the score is compiled and what it entails. Then Participant A further explained that *“That is a problem, also for the companies themselves. [...] It could also be about not having the actual knowledge or insight into how these ratings work. [...], for example, we improved during one year, from A to AA rating and that is just like, they give you a report of 10 pages and kind of show the differences. [...] it is not really clear why we can prove, [...] is it due to just disclosing much more and having more publicly available, but [...] some critique about these ratings in terms [...] being transparent about their methodology.”*

5.4 ESG/Sustainability Controller as a new profession

5.4.1 ESG/Sustainability Controller Background

The profession of the ESG or sustainability controller is still new, and we wanted to know more about the ESG controllers' background. Therefore, we asked about which kind of educational and professional background they come from, especially business, accounting, finance, or other background. Our Participant A responded “[...] *bachelor's in business administration in Germany [...] from marketing and finance, [...] masters was the interdisciplinary programme in European studies and economy.*” “[...] *I have a mixed background, [...] work experience [...] for different departments [...] landed in working in a research project [...] it was about sustainability, benchmarking and reporting [...] this position of ESG controlling opened up for me this career field [...] then after I moved to Sweden and found the position and started the position as the ESG controller which I am working with now almost two years.*” Participant B answered that “[My] *educational background is in politics and international relations, bachelor and masters in that from Cambridge, also I have a master's degree in literature from Uppsala and my current role as sustainability controller is mainly focused on sustainability reporting both from a qualitative and a quantitative aspect.*” Further, participant B highlighted that sustainability “*is a broad background, there are a few graduates from sustainability programmes because it is so new that everyone still comes from different backgrounds.*” Based on the above responses, we understood that ESG or sustainable controllers have different educational backgrounds. Other participants further confirmed, for example Participant C “[I] *have a bachelor's in economics and [...] a masters in environmental engineering*” and participant F mentioned that he/she works as an “[...] *educated civil engineer [...] sustainability director position that I have had now for six or seven years.*”

In addition to their educational background, we noticed that some had switched careers to sustainability from different fields. Participant D1 responded that “*work within the finance team [...] has always been working with economics [...] [I] have a role called manager fiduciary [...] and work a lot with the legal requirements for annual reporting.*” Participant D2 mentioned “[I] *have a role as country HSE manager, [...] working with occupational health, safety, and environmental questions. My team has an environmental specialist, [...] this is the first time I have been involved in sustainability reporting.*” Participant E responded that “*working first as a journalist and after that for a long time as communications manager for listed companies, focusing a lot on financial reporting such as annual and interim reports. Also a lot with branding and employee branding [...] the position now is head of financial and sustainability communication, meaning that I am working with our financial reports and our sustainability reports.*” Participant F mentioned that “[I] *worked with waste management issues and [...] worked with biogas production for several years.*”

5.4.2 ESG/Sustainability Controller tasks and responsibilities

Following the discussion about the background of ESG/sustainability controller, the respondents were asked about the specific tasks and responsibilities. Many participants mentioned that their primary responsibility is gathering data and reporting internally and externally.

Participant A mentioned that *“the whole process flow of ESG data, so everything from collecting, calculating, validating, consolidating, ESG data [...] everything under the universe of sustainability, [...] also work with the whole external reporting.”* Those who are having a group of companies have a bigger role and responsibilities. Participant B commented *“[I] gather and consolidate data from all of our nine subsidiaries”*. Some companies are using various frameworks to report. Respondent A answered that *“actually using data that we internally gathered and calculated to report to different frameworks [...] of two aspects of [...] internal and external reporting.”* Reporting has differed from one company to another, there are many targets to report on annually but some companies quarterly. Participants E and F report annually and others report monthly or quarterly. Participant C mentioned that they *“do [...] monthly reporting, quarterly reporting, annual reporting.”* While participant B reported *“three times a year.”* Some ESG initiatives are internally communicated before they are publicly available, which is a task of the ESG/sustainability controller. Participant E mentioned that even though their sustainability report is annual *“it is frequently sort of providing in internal news regarding sustainability, [...] what initiatives are we doing internally that we could spread to our colleagues within the group. We also [...] have internal broadcasts send from the studio where [we] make interviews with our sustainability manager with our safety manager and so forth. [A] newly launched safety programme, which is about creating safe workplaces [...], having even better scores when it comes to safety [...] it is really important you know to follow all the rules around.”* Participant F mentioned *“[we] have an ongoing communication project called “hållbar ihop” where we have a website with about 70 or 80 sustainability related projects within our company to be as transparent and interactive as possible with the citizens and companies.”*

Sustainability reporting is changing, new regulations are coming, and frameworks are updating requirements. Therefore, ESG or sustainable controllers need to adjust their systems to gather data required manner. Further, this data needs to be analyzed and validated. Participant A mentioned, *“[I] really use the data to draw a lot of conclusions and initiate things.”* It was further mentioned that *“the reporting tool that we started working with, [...] in loose isolated like Excel sheets. And no kind of structure to it and no possibility to also validate or track the data in one system. So, it is not integrated in terms of it being an own developed internal system for management control.”* This comment further highlighted the importance of a management control system. It is the responsibility of the controller to integrate the KPIs into the existing MCS. Participant A mentioned *“it is pretty much following principles that are used in general Management control system. [...] [we] need to dedicate also more time [...] creating the KPIs [...] and give also right instructions. For example, for electricity consumption of offices should report the data in the same way, so we can consolidate the data in the consistent manner [...] need the resource there and [...] dedicate the time to such a control system.”*

Sustainability requires proper strategies. Therefore, the ESG or sustainability controller should focus on new strategies and initiatives. Participant B answered, *“Both sustainability strategies and look into the strategy but also [...] reporting. When it comes to sustainability metrics and targets, do some parts of green revenues and green investments.”* They further mentioned that *“checking, following up on environmental targets and being together with [...] all the departments in setting the sustainability strategies and checking up on with the sites that everything is going good and we are so somehow also a support function to make sure that it is possible to reach the targets.”*

Companies new to sustainable reporting due to CSRD or other regulations have started to focus on mandatory reporting. Therefore, there are additional tasks have been created for controllers. Our participant D mentioned, *“we need to see that the sustainability report is okay and it needs to be approved by the auditors. That is a legal requirement. [...] follow the regulations and also improving all the processes every day to make the reporting better and more accurate after collecting the data and analyzing it.”* Participant E answered *“The steering groups for our work with starting to be CSRD compliant. [...] I really think that we should have an ESG controller. It is obvious that every company would need that.”*

5.4.3 ESG/Sustainability Controller versus Financial Controller

The number of ESG/sustainability related tasks or functions is increasing due to various reporting and regulations requirements. We wanted to know how these functions belong to each controlling department and what the company structure is. Therefore, participants were asked whether they have a separate sustainability department or ESG controller and, if so, how these tasks are being split among controllers. Participant A responded that the *“sustainability team sits under finance, [...] reports directly to the CFO [...] we have [...] overlap and collaboration with finance, but they are not owning the topic and [...] not controlling it in any way.”* Participant B had a different view in terms of system usage, *“[we] share [...] an office with the actual controllers at the company and they sit with much more complex BI systems than I do, they also have a different background [...] more social science oriented background, and I use our reporting system, for most of our data in Excel and do not use those BI tools.”*

Participant C responded with the Finance and ESG department *“because of CSRD [...] that we are going to have this in a mutual combined way in some sort. [...] [I] hope that [...] we are merging more, [...] now it is [...] divided, [...] I hope that in the future there will be more of a one function.”* But respondent A mentioned in relation to separate sustainability department team members *“In too much of a topic and too important of a topic to just have one resource there [...] [we] already decided to increase the team.”* Participant C mentioned the segregation of tasks that Finance *“are basically doing financial and then we are doing environmental and social and governance and then we are sending them the data for the final monthly report.”* Participant D mentioned Finance department control reporting that *“finance [...] coordinates this when it comes to the sustainability reporting. That is what makes it very interesting as well, because usually it is only figures and amounts and revenues and costs. [...] finance coordinated with the other functions legal and HR and it is just communication [...] finance owns every portal [...] that comes natural or logical because [...] annual report and the sustainability report also falls under, that responsibility.”*

6 Analysis of the qualitative results

6.1 Sustainability reporting

From the results of the qualitative semi-structured interviews regarding sustainability reporting frameworks, the suggestion by Afolabi et al. (2022, p. 20) that GRI provides the most significance out of the different sustainability reporting frameworks can be supported. This is not only because GRI was mentioned by nearly all of the participants as the framework that sets the ground rules for their sustainability report. However, also due to one specific statement by participant A “*[...] with the sustainability report you cover GRI, the global reporting initiative, because that is the index you have that is a really detailed guideline where you follow how to calculate and how to report on KPIs. [...]*”. This leads us to believe that the assumed results by Afolabi et al. (2022, p. 20), regarding the GRI providing report readers with enough credible and valuable data to gain an informed consent about the overall sustainability efforts of a company, to be true.

However, almost all of the participants go beyond just reporting upon the GRI guidelines and use other frameworks to compliment their sustainability efforts to external readers. This supports the study of Albu et al. (2013, pp. 736-737) who found that there are two main factors affecting and increasing the issues regarding sustainability reporting framework discrepancy gaps. These are firstly that the amount of sustainability reporting guideline setters is too dense and therefore the initial objective of all frameworks, to work in the same direction, is not possible. This statement is verified by the participants of this study who frequently mention a great number of other frameworks or guideline setters that they are additionally following according to their specific targets. One of them, more specifically participant A, stated that “*[...] if you count in or define other kind of organizations, also as guidelines, as for example CDP, UN Global Compact, then these are all also going into and influencing our reporting [...]*”.

These statements might even be linked to sustainability reporting motivation, as theoretical insights provided by Siew (2015, pp. 187-188) suggest. Thereby, criticism upon sustainability reporting comes from using it as a tool to communicate to external stakeholders and to disclose sustainability matters according to their expectations. From an empirical standpoint, our study suggests that this is somewhat true as participant B said “*[...] for stakeholders it [sustainability reporting] is our most important instrument of communicating our sustainability and financial results every year. [...]*” and participant E elaborates further “*[...] from the beginning when we started, it was mainly as a sort of a way to meet the expectations from external stakeholders [...]*”. Nevertheless, it is important to mention that our study also suggests that pleasing stakeholders is not the only or the main reason why companies disclose sustainability reports, as transparency regarding sustainability, attract and retain new employees as well as use motivation from its core business are among the most important reasons. These findings are also partly in accordance with the research results provided by the study of Adams & Frost (2008, p. 291).

Another one, participant C, mentions that they have an industry specific organization that they have to report their sustainability data to by stating “*[...] we are doing [...] ICM because we became a member of ICM. So that is the international mining organization and we have to report according to that standard to be able to be a participant. [...]*”.

The second factor mentioned by Albu et al. (2013, pp. 736-737) is that there are other actors that influence the settings of sustainability reporting. From the results of our study, this statement can be acknowledged as well, due to the participants stating that they have to follow the Swedish reporting legislation on disclosing specific sustainability matters and KPIs, which is mandatory for nearly all of the participants. Therefore, participant B stated that “[...] we also have of course the Swedish ,årsredovisningslagen‘ [...]“ which they have to report upon.

This discrepancy between the different actors and guideline setters as mentioned by Bosi et al. (2022, p. 2) is also reflected in the results from the conducted interviews. Specific challenges that were mentioned are firstly of conceptual nature of the TBL analogy by participant B mentioning “*they [...] make it sound like it is three separate things and it is all one connected thing and that I think that it is not being addressed on [...]“* and secondly that finding a one-size-fits-all solution in terms of standard setting is a complex and extremely hard task in order to make sustainability reports universally comparable. This is reflected by the answer of another participant, more specifically participant F, stating “*we are trying to dictate what is sustainable through all European countries where the conditions are very different and that makes it a very daunting task to define what is sustainable on a global perspective without looking into local conditions. [...]“*.

Furthermore, as Afolabi et al. (2022, p. 20) suggest as part of their conclusion within their study, actors within the ‘arena’ of sustainability reporting should be more transparent and communicate with each other on a common ground to achieve objectives that point into one direction. This theoretical finding is supported, from a company’s perspective within this sustainability reporting arena, by our qualitative data from the expert interview that we received. Therefore, in participant B’s opinion the current state of sustainability reporting leads them to the following statement “[...] well, of course it would be easier to have a standardised one [...]“ and participant F states an even further described optimal situation “[...] I am guessing that we have to aim for some kind of universal reporting seen just as economics already [...]“ “*I mean, in principle, you pick up a report in Bangladesh or in Sweden or in Australia, and then they are all comparable. And we need that kind of reporting standards in sustainability as well [...]“*. These opinions of the majority of the participants strongly points into the direction that many companies and sustainability responsible are longing for a unified and mandatory reporting framework that could take up some of its core parts in terms of reporting methodologies from already existing financial reporting regulations.

Such a reporting framework has already been worked on in the past by legislative organizations, for example the EU taxonomy or SFDR (Pettingale et al., 2022). However, a brand-new regulation, called CSRD, was introduced at the beginning of 2023 regarding EU law and affects approximately 50 000 companies within the EU. This new legislation should ensure that external stakeholders will have a better overview due to greater transparency rules as well as attempting to carefully harmonize different sustainability reporting approaches into one framework (European Commission, 2023). According to O’Dochartaigh (2022, p. 4) companies that extend their NFRD efforts to CSRD are affected by it in their fiscal year 2024, large companies that do not follow NFRD by their fiscal year 2025 and listed SMEs one fiscal year later.

We found the latter two dates to be true for all of our interviewed companies, as for example participant A reports “[...] we will be affected more for next financial year 2024 and then reporting in 2025 [...]” or participant D stating “[...] for [the company] I mean we have two years now it is in 2025 that we get affected by this with the start of reporting in 2026. [...]”.

Furthermore, literature proposes two main challenges through this new regulation that companies will have to face. Firstly, in which areas companies need to focus their resources for implementation of the new legislation and secondly how this new regulation will be entangled with already existing frameworks (Baumüller & Grbenic, 2021, p. 379). We found these specific points of limitations to be acknowledged by our participants within our research study. Therefore, the main challenges in terms of CSRD were described by participant D as “[...] one big question is if we will need any additional resources. [...]” and participant C mentioned “[...] it [GRI] approximately covers about 30% of that new information. I think it is maybe a bit understated, but it is still a lot of new information that we are supposed to put into the management [...]”. Furthermore, participant B reports that in their opinion the new regulation has a lot of theoretical implications that have not yet been tested practically and therefore could cause problems. However, next to these challenges we also received positive feedback, that companies are actually looking forward to the idea of reporting framework unity, its comparability and the new double materiality for sustainability matters.

The preparation phase is seen by O’Dochartaigh (2022, p. 5) as being split into five subsections. Some of these were mentioned by our participants as well. For example, participant B stating “[...] we have started our research on it to the degree that we have a gap analysis against the ESRS part of the CSRD [...]”, which can be compared to the author’s inside-out and outside-in approach of measuring the ESG efforts to align current with future requirements. Furthermore, the analogy of focusing employee and non-employee resources can be connected to participant D’s statement “[...] they will also take part of the training [...]” and participant B mentioning “[...] we have to be prepared already this year to store the data and handle the data in a good programme [...]”. Finally, the author’s suggestion of collaboration and networking is supported by our research study results as well, by participant D stating “[...] I am part of some external networks [...] They were also discussing if it is good to exchange information like how are you preparing for this [...]”. Thereby, companies are preparing themselves, also according to literature, upon the introduction of the new CSRD legislation.

Regarding the use of sustainability reporting tools to gather, capture, display and analyze sustainable data, the participants answered differently, some answered that they use some form of Excel in combination with other data software. Such as participant F stating “[...] Excel, Excel and Excel [...] But when it comes to our use of energy and fuels that is done in more advanced databases than Excel [...]”. However, some have stated that they use a specific sustainability reporting tool, such as participant A “[...] it is actually a third-party company ‘Position Green’ that offers an ESG software solution where you can report, calculate and store all that data. [...]”. These empirical findings are somewhat different to what literature states, as theory points to formalized sustainability control systems, such as annual sustainability plans or sustainability balanced scorecards, as promoted by Battaglia et al. (2016, p. 223), which are not being used in practice.

However, the holistic view of the sustainability reporting process by Johnstone (2019, p. 56) is being supported in that way that some participants, such as participant E or B mentioned not only a specific sustainability coordinator that communicates across the corporate structure, but that all corporate parties involved discuss and support the data sustainability reporting process together.

When participants were asked about the current and future trend of non-financial measures becoming more important in decision-making, we received mixed opinions about their current effects. However, future influence seems to be rather positive, meaning that sustainable topics will play a bigger role in corporate decision-making according to the participants' opinions. Especially, participant B mentioned *"[...] personally I really like the idea of the double materiality analysis [...] that is one of the really positive things about the new legislation, because then I think it will be much easier to demonstrate to everyone in charge the financial implications of the work that we do [...]"*. These findings refute the theoretical points mentioned by Adams & Frost (2008, p. 298) in which they mention that companies see sustainability as some sort of expensive burden and that they will not be used for corporate decision-making purposes. It seems that these beliefs have changed over time and have, as of now, already become somewhat more important to some firms and will increase their effects even further in the future.

6.2 ESG/Sustainability Controller

When analyzing interviewees' academic backgrounds, it was found that most Swedish ESG/sustainability controllers have master's degrees. However, controllers are from different educational backgrounds, such as business management, engineering, politics, and international relations. On the one hand Ferreira et al.'s (2021, p. 6) study supports these findings in that controllers' jobs require a graduate degree as it is vital for organizations, but on the other hand contradicts it, due to mentioning that their results showed homogenous backgrounds within business administration. Kelly (2023) discussed that "the pendulum seems to be swinging away from ESG programs towards external reporting", mainly because of regulatory compliances. The author further explained that high-quality sustainability programs are nice to have, but rock-solid external reporting is something corporations need. When analyzing the interviewees' current job responsibilities, we found that most ESG/Sustainable controllers' tasks are connected to gathering data, analyzing and reporting externally using various frameworks. Group ESG/sustainability controllers have a more prominent role as their scope of work is broad, and they need to deal with different projects, sectors/industries of the companies. Participant B mentioned that *"projects on a day-to-day basis they are all aimed at our sustainability communication, which culminates in the yearly report"*. Further, participant B responded, *"the sustainability report is the big product of the year, so that depends how you define the human rights due diligence project and the value chain and mapping and management and project because they are very closely linked to the sustainability report"*. Kelly (2023) stated that the ESG controller works with other departments to create KPIs aligned with regulatory requirements and mitigate reporting risks by ensuring controls are in place during the ESG data-gathering process. Participant A stated *"you use the data to draw [...] conclusions and initiate things."* Many of our participants mentioned that they get the service of external rating agencies. So, this is also the task of ESG/sustainability controllers to provide accurate and timely information through rating agencies' portals or questionnaires.

CrossCountry Consulting (2022) noted that ESG controllers need to drive ESG reporting, strategy, and regulatory compliance in a future-ready way. In addition to the above, ESG controllers can help bridge the gap between current and future state ESG reporting. This may be due to CSRD. Therefore, the existing ESG/sustainability controller has a more significant responsibility. Participant C mentioned, *"look into strategy [...] but also reporting"*. Participant A mentioned that tasks are a *"whole process of ESG data [...] quite broad in subject matters, like [...] internal process"*. According to Kelly (2023), an ESG controller job is to be an expert on ESG disclosure requirements and related frameworks. In addition, ESG/sustainability controllers should be able to collaborate with other departments and design processes to capture ESG data. If not, they are unfit for external reporting and other tasks. Participant D mentioned *"improving processes"* with existing resources. However, participant E mentioned the necessity of a separate ESG/Sustainability controller due to increased mandatory reporting requirements, such as CSRD, subject to auditing. Further, participant A stated they have planned to hire more for sustainability tasks due to *"growing [...] demands and pressure from different stakeholders [...]"*. These responses align with O'Dochartaigh's (2022, p. 5) Regulation Ready Model study on the necessity of dedicated human resources to ESG management and reporting. It seems that the difference between the role of the ESG/Sustainability controller and a traditional controller lies within the tasks themselves. Therefore, the ESG/Sustainability controller is working rather externally from the controlling department, engaging with different kinds of operational colleagues to gather the data necessary and not specifically being tied to preparing or analyzing financial reports, budgets or forecasts.

CrossCountry Consulting (2022) emphasises the importance of understanding the financial and operational aspects of the business by the ESG controller. The author mentioned that the ESG controller with a seasoned and proven financial reporting and operations track record would understand the interdependencies to drive ESG goals. In our study, participant E had experience relating to external reporting and communications and stated, *"I have been the project manager for our recent sustainable annual and sustainability report in close collaboration with our sustainability manager."* This combination shows the importance of collaboration and coordination concerning sustainable reporting with the finance and sustainability department. According to Participant D, the legal, sustainability and finance departments have shared responsibilities towards sustainability reporting. These responses highlighted the study suggestion of O'Dochartaigh's (2022) communication and coordination of the whole firm to prepare for new regulations. Participants were asked whether they have a separate sustainability department or ESG controller. We have received different responses, as discussed in the research findings. One company has a separate department, some companies have shared responsibility with the ESG coordinator or sustainability manager, the sustainability team report to CFO and sits with finance, but tasks have been segregated. Based on these responses, we see that ESG/Sustainability controller or department roles, responsibilities and structure did not yet organise well, but it will start to change within the near future due to the importance of future sustainability requirements of companies. This conclusion is supported by participant E stating *"[...] I really think that we should have an ESG controller. It is obvious that every company would need that. But we do not have that right now. [...]"*.

7 Conclusion and recommendations for future research

7.1 Conclusion

The main objective of this study was to answer the following two research questions: Firstly, *‘How are companies conducting their sustainability reports and what is their opinion on a unified sustainability reporting framework?’* and secondly, *‘What is the companies’ opinion on the upcoming role of the ESG/Sustainability controller in terms of necessity, tasks, responsibilities and differences to traditional controller functions?’*. In order to achieve these goals and fulfill the purpose of our study, we conducted qualitative, semi-structured interviews with six participants of medium and large Swedish companies.

Our study acknowledges the findings of Afolabi et al. (2022, p. 20) who state that GRI is currently the most important sustainability reporting framework. This is supported by almost all of the participants answering that they use GRI as their grounding index for disclosing upon sustainability matters.

However, most participants go beyond just reporting on GRI terms and extent their sustainability reports with disclosing according to various other guidelines and frameworks, such as UNGC, CDP or TCFD. This seems to be connected to sustainability reporting motivation, where a general bridge can be found between the theoretical criticism by Siew (2015, pp. 187-188) among using SR as a tool for external stakeholders and our research study. Thereby, we found that some participants specifically mention external stakeholders to be the reason for conducting the sustainability report, however, we also found contradicting data that suggests that among the most important motives for companies to disclose upon sustainability matters are transparency, to retain old and attract new employees and connections to a company’s core business.

The general consensus of the research study data regarding having one instead of many different frameworks and guidelines is that companies would appreciate a unified standard setter. However, previous attempts by legislative organizations failed to do exactly that (Pettingale et al., 2022). Nevertheless, a new legislation already in place, called CSRD, could change these unifying reporting issues. Therefore, CSRD attempts to increase the scope of transparency to external stakeholders to give them a fairer and better overview on a company’s sustainability efforts and at the same time unify all sustainability disclosing aspects into one regulation collective (European Commission, 2023). This is overall being supported by the companies participating in our study, however, due to the tight schedule of affecting the sustainability cycle and its mandatory nature, imminent challenges regarding extent and differences to already existing disclosing regulations as well as unclear practical implications will be future issues. Therefore, some of the most common preparations for this new legislation are to do a gap analysis to current sustainability reporting frameworks, to train all people involved in CSRD reporting and prepare the software as well as to network and collaborate with companies facing the same difficulties. This perfectly aligns with theoretical implications and recommendations on regulative changes by O’Dochartaigh (2022, p. 5).

Based on our study ESG/Sustainability controllers have different educational backgrounds. Further, most of them have at least a masters degree in relation to business administration. However, some of them had completely different backgrounds, such as philosophy or engineering. This contradicts the findings of Ferreira et al. (2021, p. 3), who investigated the sustainability controller backgrounds within Brazil. The results of our study are backed by a statement of one of the participants mentioning that it is a relatively new environment and profession to work within and nobody would have dreamt of becoming an ESG/Sustainability in the past, due to the profession not even existing then.

ESG tasks include data gathering, analyzing, validating and reporting. When performing these tasks, there should be a strategy, a well-defined process, a proper internal control system, aligned responsibilities and comply with legal requirements. Based on our study concerning the tasks and responsibilities of the ESG/Sustainability controllers are still evolving in Sweden. These new ESG tasks and responsibilities have been shared between legal, finance, human resources and sustainability departments for some companies. They differ thus far from traditional controller tasks in that most of the responsible to ESG/sustainability reporting do not, or to a very low degree, work on financial reports, budgets or forecasts and are therefore purely dedicated to sustainability tasks.

However, ESG tasks and responsibilities are developing due to mandatory regulations such as EU taxonomy and upcoming CSRD. Therefore, it is evident that every organization needs to have a dedicated ESG/Sustainability controller and the Regulation Ready model of O'Dochartaigh's (2022, p. 5) recommendations aligned with this study.

7.2 Social and ethical implementations

The development of sustainability guidelines within the corporate structure is first and foremost a good step into the right direction. However, as ESG, not only stands for environmental, but also social and governance matters, it can be concluded that when companies report on ESG matters, it has a definite effect on society. Therefore, the societal value added from this thesis is that external stakeholders of companies should support the development of mandatory and stricter regulations. This is due to companies following previous, voluntary guidelines rather than rules which has led them to abuse this system in specific cases to report on advantageous segments and skim over other, negatively influencing sustainability topics within their reports. Another implication is that during the course of the interviews, the importance of social KPIs not only to monitor, but to actively use them in day-to-day tasks and activities has been stressed by the companies. Thereby, it can be concluded that ESG matters, not only environmental, but also societal matters are becoming more and more important to companies themselves and how they integrate their controlling tools.

Regarding ethical considerations, the thesis contains a qualitative study that was conducted by firstly researching upon Swedish companies, secondly messaging appropriate, potential participants via E-Mail and thirdly conducting six in-depth, semi-structured interviews to gather the qualitative data. As described in the methodology part of this thesis, the study was designed in a way to make sure that participants are not harmed during any stage and that their information provided was being handled both anonymously as well as confidential.

Therefore, a document of consent and data privacy was sent to them in beforehand and additionally oral consent was gained as part of the interview conducted. Only general information that cannot be traced back to the companies or responsible themselves was mentioned in the course of the study.

7.3 Implications for organizations

From our thesis it becomes evident that sustainability reporting is a vital topic, especially for medium and large sized European companies in the nearby future as not only the regulation will be mandatory to implement into the reporting to these companies by at least 2026. Moreover, we found that companies should be investigating the new regulations implied by the CSRD as all of our participants of the study were preparing in some kind of way for implementation of this new regulative. The most common ways mentioned in which those companies were preparing are to do a gap analysis to current sustainability reporting frameworks, train employees involved in CSRD reporting, prepare the software and network as well as collaborate with companies facing the same difficulties. Furthermore, companies should focus on hiring dedicated ESG/Sustainability controllers, as they will be responsible for gathering the data, helping to prepare the sustainability report and overall support the sustainability processes within the company. Therefore, they act as the bridge between traditional controlling and the sustainability department as a sustainability expert.

7.4 Truth criterions

Stating the standard criterions in research writing is an essential part to validate credibility to a researchers work and judge the manner in which professional research has been conducted. Thereby, third-party research study writers should, according to these criterions, be enabled to compare the quality of various different studies among each other, criticize and acknowledge the scientific work within these studies (Saunders et al., 2019, pp. 213-214). The most important quality criteria within business research are reliability, validity as well as replicability. The former term, reliability, stands for the criterion that is concerned with if the conducted study in its setting and its results can be repeated to be able to achieve similar or the same results. This specific criterion is especially important within quantitative research studies. Replicability in that sense is closely entangled with reliability, that it concerns the statement of the research process and procedures within the research study, to be able to replicate the study as described above. Lastly, validity is a quality criterion that measures and confirms the findings and results of a research study. It can be divided into measurement validity, which investigates the logical fit of quantitative variables, the external validity, which is concerned with the generalizability of the findings to the researched concept and ecological validity. The latter concept is targeted to confirm the general idea of implementing qualitative concepts into a research study (Bell et al., 2019, pp. 46-47). Most of these concepts are used specifically for quantitative studies, however, especially mentioning topics regarding trustworthiness or confirmability are necessary in order to link qualitative studies to quality criterion (Bell et al., 2019, p. 48). These are the topics that we will focus on as qualitative researchers in the next sub-sections.

7.4.1 Trustworthiness

This topic is made up by four sub-topics, such as credibility, transferability, dependability and confirmability, which are discussed upon theoretically and practically in the following paragraphs (Bell et al., 2019, p. 363).

Credibility

Credit is important to a qualitative research topic, as the interpretivist stance of the researcher through receiving respondents' opinions, values or emotions could influence the study in each way. Therefore, it is vital to ask the respondents, if their statements have been understood in the right way, in order for the research earn credibility (Bell et al., 2019, p. 363). The above-mentioned procedure has been followed during our research study, as firstly, we used a document that explains the research approach as well as university specific guidelines and asked for permission multiple times. We also used a semi-structured interview approach, where a question guide was sent in before the interviews to the respondents, to conduct the expert discussions with the responsible of the companies in order to increase credibility.

Transferability

Qualitative research studies, typically, contain a much broader and deeper set of data that is acquired than in quantitative works. Thereby, from the qualitative findings the concept in question should be analyzed in-depth, which means that the data should cover a rich description of the information gathered within the research process (Bell et al., 2019, p. 365). Within our thesis, this qualitative criterion was satisfied by using an in-depth approach of semi-structured interviews, that were recorded and thereafter transcribed. The transcripts of each of the six conducted interviews accumulated to approximately 60 pages. After transcribing, specific data patterns regarding the topics were searched upon across the transcripts, marked and used as references within the analysis part of the thesis.

Dependability

This criterion handles the validation of the data and dataset as, in theory, auditors should be tasked to look over the data and dataset to confirm or deny the credibility of the researchers. However, due to the vastness of amounts of data and datasets, this criterion given is less attention regarding the validation of the researcher's data (Bell et al., 2019, p. 365). In terms of dependability, this thesis was conducted by holding account of potential and contacted firms through a Microsoft Excel document, where specifically company and thesis-specific information was gathered. The interviews were first saved as voice documents and later transcribed into Microsoft Word documents. It was made sure by the thesis writers that the process of receiving and storing data during the research process according to the Umeå University guidelines have been held into place.

Confirmability

By stating information regarding this criterion researchers should be able to acknowledge that full objectivity cannot be reached, however, they have acted and laid out their research processes in a professional, plausible and scientific manner (Bell et al., 2019, p. 365).

The thesis authors have respected the above-mentioned principle through mentioning their stance in terms of paradigms (interpretivism) and their in-depth description of the qualitative data collection and analysis within the methodology chapter of this thesis. Furthermore, the qualitative interviews and the whole research process have been held into place according to the Umeå University guidelines.

7.5 Limitations and future research

The main limitation of our study was the time constraints that we faced in terms of conducting a thesis on a master level within ten weeks. This not only affected the way we wrote our thesis, but also the process by which we needed to get in contact with companies, the amount of responses we got as well as the number of semi-structured interviews we conducted. Nevertheless, as already mentioned in the methodology part, we conducted enough qualitative data to be able to answer our research questions in-depth.

Another obstacle that we faced during our research study was that there is little known about the exact profession of ‘the ESG/Sustainability Controller’, therefore the theoretical input was affected and limited in the amount of literature we found. However, our study is basically pioneering in creating a profile for this new controlling profession and therefore adding valuable data to the literature.

In terms of future research, it will be interesting to see how Swedish companies are affected by the new legislation of CSRD, when it affects their reporting procedures in 2024/2025, which could propose a specific topic to look at in the future. Further studies could include what future problems companies face, how they compare to previously mentioned challenges and if they are one step closer to unification in sustainability reporting by the introduction of the CSRD regulative. Another topic, worthwhile to explore could be a cross-country study within the EU on how companies in other countries deal with this legislative change, compared to Swedish medium/large companies. Moreover, we would like to express a follow-up study on the necessity of ESG/Sustainability controllers and other aspects regarding the new profession as a more in-depth study.

Lastly, in our thesis we found that some companies used an ESG score within their sustainability reports, however, we did not pick up on analyzing or discussing this part in further detail, due to our specific research focus on sustainability reporting and the role of the ESG/Sustainability controller. It must be said though that most of the participants mentioned that they do not understand the methodology and calculations behind them or recognize criticism behind disclosing a single score without further details. Therefore, another future topic to look at more in-depth could be ESG scores’ value within sustainability reports and how companies or report readers are affected by them.

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Appendix

Appendix 1: Standard invitation E-Mail to potential participants

Hej!

We are students at Umeå University and we are currently doing our master thesis within Business Administration (Accounting/Finance).

Within our research of "Sustainability reporting differences among Swedish companies and the developing role of the ESG Controller", we found that your company is preparing a sustainability report. Therefore, we are keen to ask whether somebody within your finance/accounting/controlling department (preferably with impact on the sustainability report) would have the time to answer questions as part of a qualitative, semi-structured interview.

The interview would be conducted through MS Teams or Zoom as part of an online interview and it would take around 30-45 minutes, as we know that time is valuable.

If you would like to participate in our study, we would kindly ask you to reply to this E-Mail and if possible let us know a date suggestion for conducting the interview that lies between 17.04.2023 - 05.05.2023.

Thereafter, we will send you the interview questionnaire and a form regarding the GDPR and interview approval on your side from Umeå University. We kindly ask you to return this document with your signature back to us as soon as possible.

We are looking forward to hearing from you soon and want to thank you in beforehand.

Kind regards,

Stefan Schaumberger & Vijitha Dasanayaka

Interview Guide

Background

1. Is it all right for you if we record the interview?
2. Could you explain your background and your current working position?

Sustainability

3. With regard to TBL, which factor is most important to you out of planet, people or profit?
4. Do you think that sustainability has a significant effect on the overall financial positions of a company? (for example revenues, operational and overhead costs, etc.)

Sustainability Reporting

5. What internal frameworks or guidelines do you follow on SR and what is your opinion on using more than one framework rather than a standardized one?
6. Do you use any third-party organizations that calculate a SR or ESG-score for you? If so, can you quickly explain how this works and which purpose those scores serve for you?
7. How do you collect data regarding sustainable KPIs? Who determines what goals and policies to follow in relation to sustainable reporting?
8. How is the management control system designed or developed to report on sustainability?
9. How do you obtain knowledge and inspiration regarding sustainability and sustainability reporting?
10. What are your responsibilities relating to sustainability work? How does the company work with the sustainability reporting on a daily basis?
11. Have you received any specific training or education within sustainability reporting?
12. Is there a difference between the financial goals and sustainable goals? How has the company communicated these goals to employees?
13. Is there a support from all other departments to gather sustainable information? How is the collaboration from other departments to report on sustainability?

14. Do you experience that there is too much focus on reporting of the sustainable activities, and therefore it is becoming more difficult to integrate those topics with existing management controls?
15. In which ways has the implementation of the Corporate Sustainability Reporting Directive (CSRD) influenced the company? Is that a good development in your opinion?
16. What is the company's overall motive behind sustainability reporting?
17. What are the limitations or challenges of ESG, TBL or Sustainable reporting?
18. Do you like to add something regarding your sustainability reporting process?

ESG Controller

19. Do you have a separate sustainability department or ESG Controller?
 - a. If so, what are the specific tasks and responsibilities of ESG/sustainable controllers?
 - b. Are ESG/sustainable controllers helping to standardize specific sustainable reporting guidelines?
 - c. If so, are ESG/sustainable controllers helping integrate SCS within existing MCS?
 - d. If not, how are these tasks being split among financial/functional controllers?
20. What are your responsibilities relating to the management control system?
21. Do you use financial and non-financial data when making decisions and evaluating your sustainability work?
22. What would you say about integrating ESG matters into your company's decision-making and strategy? If yes, how?



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Information about participation in a student thesis

We are Vijitha Dasanayaka and Stefan Schaumberger and are students at Umeå University writing a thesis about Sustainability/ESG controlling with the purpose to identify differences and challenges among Swedish companies' sustainability reporting and to identify and further clarify the developing role of an ESG controller.

For interviews: We conduct interviews with 6-10 people within 6-10 companies. The material will be compiled and presented in a thesis published in DivA <https://umu.diva-portal.org/>.

You will be able to see the results of the study by visiting the 'DivA' website mentioned above, where our thesis will be published in PDF-format after hand-in, reference check and verification by our student administration. The data gathered within the study will be handled anonymously, which means that any data gathered from the interviews will be integrated into the thesis confidentially, to avoid the trackability of the data.

It is completely voluntary to participate. You can choose not to join anymore at any time and you do not have to say why.

If you want to get in touch with us, you can do so via email address:
stefanschaumberger2@gmail.com (Stefan Schaumberger) and vijitha.dasanayaka@yahoo.com (Vijitha Dasanayaka).

Consent to process personal data

Prior to the thesis work at the department for Business Administration, Umeå School of Business, Economics and Statistics the following personal information about you will be collected and processed: General data about the demographics of the interviewed participant, job-description as well as data among personal opinions and experiences about how various sustainability reporting guidelines and certificates are being used to create sustainability reports, the role of the controller and the developing role of the ESG controller.

Your consent is required for personal data to be processed. Umeå University is responsible for the processing of personal data. Contact information for Umeå University is: Umeå University, 901 87 Umeå, registrator@umu.se, 090-786 50 00. Umeå University has appointed a data protection officer. The Data Protection Officer can be reached at pulo@umu.se or by calling 090-786 50 00.

Your personal data will, with the support of the consent, be processed at the latest until the time when the student work has been approved.

Your personal information will only be handled by authorized students and authorized staff at Umeå University.

You have the right to withdraw your consent at any time. You do this by contacting our supervisor: Henrik Höglund / henrik.hoglund@hanken.fi. Please note, however, that a revocation of your consent does not affect the legality of the processing before the consent is revoked.

You also have the right to contact Umeå University to obtain information about what information is processed about you or to request correction, transfer, deletion or limitation of your personal information. You can also contact the university's data protection officer by email pulo@umu.se. For more information on how the university processes personal data, see: umu.se/gdpr



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You also have the right to lodge a complaint with the supervisory authority, the Swedish Privacy Protection Authority, if you think that we process your personal data incorrectly.

Do you agree to the use of your personal data in the manner described above?

Yes ☐ Date:

Name:



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Information about Umeå University's processing of personal data in student projects/thesis

If you choose to participate, certain information about you will be processed. This information will be collected by conducting an online interview via Zoom/MS teams, where data will be gathered via voice recording devices and stored only over a specified folder forwarded by Umeå University within MS Teams. The folder can only be accessed by the two thesis students as well as their supervisor. The information or part of the information will be able to be linked to you through the information received during the interview. However, the results will be presented in an anonymous way, where the information will neither be able to be linked to the company nor to the interviewed participant. Information that can be linked to you in this way is counted as personal data in accordance with the EU Data Protection Regulation 2016/679 (GDPR). The reason why such personal data needs to be processed in student work is to gather data necessary to conduct a qualitative study.

Umeå University is responsible for personal data for this processing. The legal basis for the processing of personal data is your consent in accordance with the EU Data Protection Regulation, Article 6.1 a.

The personal data will be stored at the university in such a way that, in addition to the responsible student, only authorized staff at the university will be given access to the personal data. The information will be processed so that unauthorized persons cannot access it.

Your personal data will be processed during the entire student work that will take place from the date the interview is being conducted, until publication to the DivA online platform by the university administration, which will be around July 2023 and will then be deleted.

Documentation for student work, which includes your personal information, is screened after the student's grades have been reported in the university's study register.

According to the EU Data Protection Regulation and national supplementary legislation, you have the right to:

- request access to your personal data (request so-called register extracts)
- get your personal information corrected
- get your personal information deleted
- have the processing of your personal data restricted.

In certain circumstances, the Data Protection Regulation and supplementary national legislation allow for exceptions to these rights. The right of access to their data may, for example, be limited by confidentiality requirements, and the right to have data deleted may be limited by rules concerning archiving.

If you wish to invoke any of these rights, you must contact the Data Protection Officer at Umeå University (pulo@umu.se) and provide information about current student work.

If you are dissatisfied with how your personal data is processed, you have the right to complain to the Privacy Protection Authority. Information about this is available on the authority's website (imy.se).



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